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CLEVELAND EDUCATION SURVEY

FINANCING THE PUBLIC SCHOOLS

BY
EARLE CLARK
STATISTICIAN OF THE RUSSELL SAGE FOUNDATION

Cleveland Foundation.
Publications. 5

THE SURVEY COMMITTEE OF THE
CLEVELAND FOUNDATION
CLEVELAND · OHIO

5 1915

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Printed December, 1915, 1300 copies
Reprinted May, 1916, 1000 copies

WM. F. FELL CO. PRINTERS
PHILADELPHIA

FOREWORD

This report on "Financing the Public Schools" is one of the 25 sections of the report of the Education Survey of Cleveland conducted by the Survey Committee of the Cleveland Foundation in 1915. Twenty-three of these sections will be published as separate monographs. In addition there will be a larger volume giving a summary of the findings and recommendations relating to the regular work of the public schools, and a second similar volume giving the summary of those sections relating to industrial education. Copies of all these publications may be obtained from the Cleveland Foundation. They may also be obtained from the Division of Education of the Russell Sage Foundation, New York City. A complete list will be found in the back of this volume, together with prices.

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FINANCING THE PUBLIC SCHOOLS

CHAPTER I

EXPENDITURE AND REVENUE

The activities of the school systems of American cities are conditioned upon the collection and disbursement of public funds: the public school is borne upon the shoulders of the taxpayer. From this intimate relationship between taxes and education it follows that financial as well as educational problems must be considered by the school authorities. Indeed, every educational problem is, on complete analysis, a financial problem, and every financial problem pertaining to the schools an educational problem. The members of a board of education must decide how much money is to be spent for the operation and maintenance of schools and for improvements in the school plant; they must secure, through taxation or by other methods, the funds needed for school purposes. In directing expenditures, and in collecting and managing school funds, they should avoid waste and should seek to obtain for each dollar paid out the largest possible educational return.

The financial operations of the Cleveland Board of

Education are conducted on a large scale. Each year the Board spends millions of dollars for school purposes, and the expenditure has been mounting from year to year. Table 1 and Diagram 1 show expenditures for the years from 1902 to 1914.

TABLE 1.—EXPENSES AND OUTLAYS OF THE CLEVELAND BOARD OF EDUCATION. 1902–14 *

Year	Operation and maintenance	Outlay	Operation, maintenance, and outlay
1902–3	$1,768,847	$593,880	$2,362,727
1903–4	1,797,116	643,307	2,440,423
1904–5	1,913,165	397,184	2,310,349
1905–6	2,025,045	585,319	2,610,364
1906–7	2,184,139	338,828	2,522,967
1907–8	2,334,764	690,671	3,025,435
1908–9	2,581,561	827,508	3,409,069
1909–10	2,812,688	812,161	3,624,849
1910–11	3,001,543	1,003,597	4,005,140
1911–12	3,115,303	987,554	4,102,857
1912–13	3,470,510	842,856	4,313,366
1913–14	3,820,748	950,274	4,771,022

* Annual reports of the Clerk of the Board of Education. "Operation and Maintenance" includes amounts reported as "total ordinary disbursements" from the tuition, contingent, building, and bonds and interest funds; in "outlay" are included amounts reported as "paid for permanent improvements" or "paid for improvements." The sum of $35,928.10, transferred in 1913–14 from the building fund to the contingent fund, is not included under "outlay."

In 1902 the total expenditure for public schools was $2,362,727. The expenditure for 1913–14 was more than twice as great—$4,771,022. For the early years of the period the curve representing expenditures shows an irregular course, but since 1906–7 the increase has been continuous.

In the table and in the diagram expenditure for improvements—new buildings, new equipment, land,

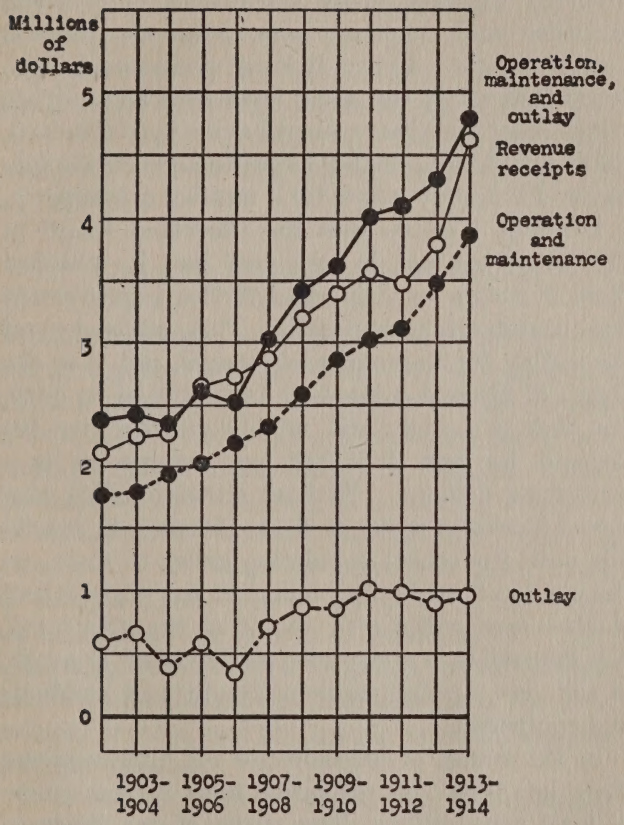


Diagram 1.—Expenditures and revenue receipts of the Cleveland Board of Education. 1902–14

etc.—and current expenses of operation are shown separately. A modern public school building is intended to serve many generations of scholars, and such equipment as chairs, desks, etc., is used year after year. Hence, it is not uncommonly supposed that a city can equip itself with an adequate school plant and that, a plant having been obtained, there should be no further large demands on the taxpayers for improvements for a number of years.

Diagram 1 shows that the Cleveland Board of Education has not in any year had its physical plant in such a condition that further improvement was considered unnecessary. This persistence of the outlay for improvements means, not that the Board of Education has been neglectful of its duty, but that in a large and rapidly growing city the demand for new buildings and equipment is a continuing demand. Without either building new school houses in advance of the demand, to remain idle until the school population grows to them, on the one hand, or leaving a part of the city's school children unprovided with schools, on the other hand, it is impossible in a city such as Cleveland to avoid, in any year, a considerable outlay for new buildings and equipment.

In the course of expenditures for improvements there has been less regularity than in the course of total expenditures. The curve of the diagram shows that the heaviest outlay occurred in 1910–11 and the lightest in 1906–7. The outlays for the more recent years, though lower than those for 1910–

11, have materially exceeded the outlays for the earlier years of the period. Cleveland's outlay for improvements, like the total expenditure, has evidently undergone a rapid increase.

The expenditure for the operation and maintenance of the schools has advanced steadily and rapidly. The lowest figure for the period, $1,768,847, is that for 1902–3; the highest, $3,820,748, is that for 1913–14.

The Financial Condition of the Board of Education

A steady increase in expenditures for school purposes is a normal and healthy feature of the educational life of a growing city. But if there is an increase in expenditures without a corresponding increase in school income, or in the means of developing income, the school authorities will be placed in a difficult and embarrassing position. In Cleveland, while the revenues of the Board of Education have steadily increased, their growth has been, on the whole, less rapid than the growth in expenditures. Table 2 shows, for the past 12 school years, the expenditure for current expenses and improvements, the total ordinary income, and the margin between expenditure and income.

In all but two of the 12 school years most recently completed, expenditure exceeded revenue. Moreover, the margin between expenditure and revenue is seen to have been wider in the later than in the earlier years of the period.

TABLE 2.—RELATION OF THE EXPENDITURES OF THE BOARD OF EDUCATION TO ORDINARY INCOME. 1902–14[a]

Year	Expenditure for operation, maintenance, and outlay	Revenue receipts[b]	Excess of expenditure over receipts	Excess of receipts over expenditure
1902–3	$2,362,727	$2,113,555	$249,172	..
1903–4	2,440,423	2,252,180	188,243	..
1904–5	2,310,349	2,262,422	47,927	..
1905–6	2,610,364	2,660,435	..	$50,071
1906–7	2,522,967	2,717,678	..	194,711
1907–8	3,025,435	2,859,004	166,431	..
1908–9	3,409,069	3,227,677	181,392	..
1909–10	3,624,849	3,399,496	225,353	..
1910–11	4,005,140	3,577,319	427,821	..
1911–12	4,102,857	3,467,404	635,453	..
1912–13	4,313,366	3,761,716	551,650	..
1913–14	4,771,022	4,514,421[c]	256,601	..

[a] Annual reports of the Clerk of the Board of Education.

[b] Includes receipts from state and local taxation, the income from the Western Reserve Fund, and "earnings" other than the earnings of the sinking fund.

[c] This figure includes the amount received through a tax levy of one mill on the dollar, authorized by a special vote of the people. If authorization for this special levy had been refused, the Board's revenue for the year would have been less by nearly $800,000.

No organization, either public or private, can indefinitely continue to spend more than it receives. The Cleveland Board of Education has regularly added to its income by borrowing money. Most of the borrowing has been done by means of selling bonds, the money raised being expended on the permanent improvement of the school plant. The practice of borrowing, through the sale of bonds, money to be used for improvements, though it has disadvantages which will be mentioned later in the present report, is common among school boards. But the Cleveland Board of Education has not confined its borrowing to the marketing of bonds. By

reason of shortages in available funds the Board has been forced, in each of the past four years, to borrow, on short term notes, money for the current expenses of operation and maintenance. As borrowing for this purpose is to be regarded as an emergency measure, the amounts borrowed, and the increase in these amounts from year to year, will serve as an index of the Board's financial necessities.

In compliance with the provisions of a state law, the finances of the Board of Education are administered through four funds. These funds are known respectively as the tuition fund, the contingent fund, the building fund, and the bonds and interest fund. The tuition and contingent funds, from which the expenditures of operation and maintenance are paid, are the funds for which it has been necessary to borrow on short term notes. Table 3 shows the amounts borrowed.

TABLE 3.—AMOUNTS BORROWED BY THE BOARD OF EDUCATION ON SHORT TERM NOTES FOR THE TUITION FUND AND THE CONTINGENT FUND. 1911–15[a]

School year	Total borrowings during year		
	Tuition fund	Contingent fund	Tuition and contingent funds combined
1911–12	$200,000	$50,000	$250,000
1912–13	260,000	90,000	350,000
1913–14	368,000	41,000	409,000
1914–15	535,000	245,000	780,000

[a] Data supplied by the Clerk of the Board of Education. It should be understood that the figures of the table indicate, not the amount of the Board's indebtedness on any one day, but the total amounts for which notes were issued during the year. As loans have been obtained and repaid, since 1912–13, twice in each year, the indebtedness on notes has never, in the past three years, equalled the amount of the year's borrowings. For a further discussion of this subject see pp. 75–78.

In the school year just closed the Board of Education found it necessary to borrow more than three-quarters of a million dollars—over three times the amount which was borrowed three years earlier.

While total borrowings reflect, in a general way, the financial embarrassment of the Board, there are other factors which affect the situation. Taking into consideration not only borrowings and cash balances, but outstanding bills and contracts, the office of the Director of Schools has estimated the deficits in the tuition and contingent funds on February 1 for the years 1912–15, inclusive. The figures are presented in Table 4 and in Diagram 2.

TABLE 4.—DEFICITS IN THE TUITION FUND AND IN THE CONTINGENT FUND OF THE BOARD OF EDUCATION ON FEBRUARY 1, FOR THE YEARS 1912–15, INCLUSIVE[a]

Date	Deficit in		
	Tuition fund	Contingent fund	Tuition and contingent funds combined
February 1, 1912	$115,809	$202,489	$318,298
February 1, 1913	259,747	264,256	524,003
February 1, 1914	362,027	199,314	561,341
February 1, 1915	429,526	283,532	713,058

[a] Data supplied by the office of the Director of Schools.

According to the figures of the table, the deficit of the Board increased from $318,000 in 1912, the year in which borrowing on short term notes began, to $713,000 in 1915.

The members and officers of the Board of Education are fully aware of the unsatisfactory condition

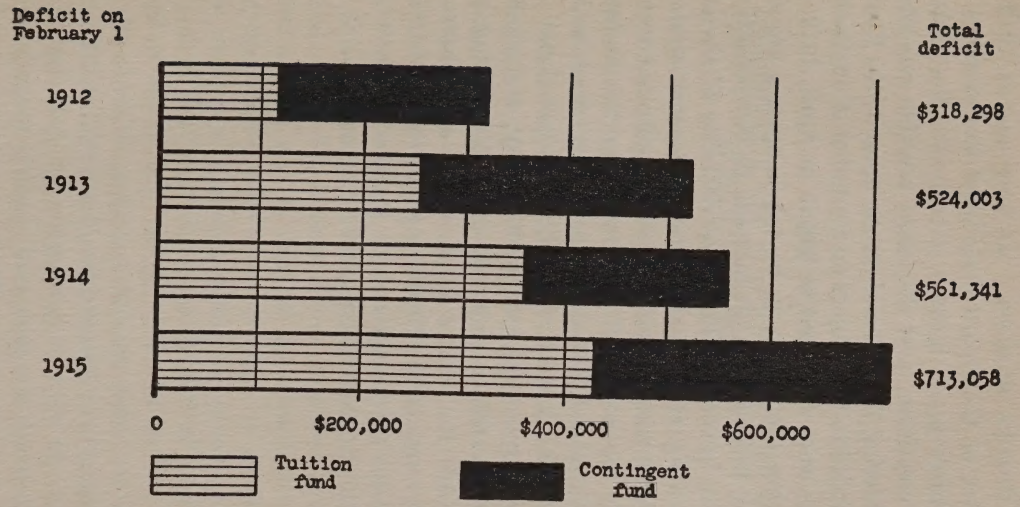


Diagram 2.—Deficits in the tuition fund and in the contingent fund of the Board of Education on February 1, for the years 1912–15, inclusive

of the Board's finances. As long ago as 1912 a committee of the Board considered the pressure of expenditures upon income, mentioned the causes of this condition, and discussed possible remedies. In considering the demands made upon it, the Board has returned to the subject on a number of occasions. Finances were discussed at length in April, 1913, in considering the action to be taken upon a request made by teachers for an increase in compensation, and again in considering the advisability of abolishing the study of German in the elementary schools.

The facts which have been presented point to the necessity for a careful inquiry as to the finances of the Cleveland Board of Education. Such an inquiry should answer the following questions: Is the Board spending too much money, and should its expenditures be reduced, or is it spending too little? Are the school funds wisely administered? Is the revenue of the Board so small that legitimate educational needs can not be satisfied, and, if so, how is the Board's income to be increased?

CHAPTER II

ADEQUACY OF EXPENDITURES FOR SCHOOL PURPOSES

In inquiring as to the adequacy of Cleveland's expenditure for school purposes it must be borne in mind that the amounts paid out, instead of being excessive, may be insufficient to meet the needs of the city's schools. While spending beyond its income, the Board of Education may be spending, from an educational point of view, too little rather than too much.

The determination of the sufficiency or the insufficiency of school expenditure is made difficult by the absence of a recognized standard of educational costs. Students of school administration have never agreed, nor in view of the complexity of the question would it be easy for them to agree, as to how much a city should spend for schools for each person in the population, per $1,000 of wealth, per child of school age, or per child attending school. In the absence of such a definite standard a city's expenditure for school purposes may best be measured and evaluated by comparing it with the expenditures of other cities. This does not mean that the

expenditure of any city, or the average expenditure of a group of cities, represents the ideal. It means rather that, as cities are working toward a common end, in the face of common difficulties and obstacles, the average achievement of a group represents the prevalent attainable ideal for American cities. The prevailing practice is not the goal toward which educators are working, but a compromise between what is thought to be desirable and what is found to be possible. It serves as a convenient scale by which to measure achievement.

As the educational problems of the large city differ from those of the smaller city or town, it is important, in comparing city expenditures, to deal only with cities of approximately the same size. The cities with which Cleveland will be compared in the present section are all those having from 250,000 to 750,000 inhabitants in 1913 for which data are available.

A small and poor city can not spend as much money for schools as can a large and wealthy city; nor is it needful that a city having a small number of children to educate should spend as much as a city having a large number of children. If comparisons of educational expenditures are to yield significant results, differences in the resources and educational needs of the cities compared must be considered and allowed for. A city's resources determine what it is able to spend for school purposes; its educational needs determine what it should spend. The amount spent, considered in relation to re-

sources, reflects the community's generosity—the value which its citizens place on public education; the amount spent, considered in relation to educational needs, indicates the character of the tools and supplies with which the educational authorities are asked to accomplish a given amount of work.

In the present study, allowance for differences in resources will be made by basing comparisons on expenditure per inhabitant and expenditure per $1,000 of wealth; allowance will be made for differences in educational needs by basing comparisons on expenditure per child in average daily attendance. The first two standards mentioned will be used in comparing total expenditures for operation and maintenance; the third will be used in comparing total expenditures for operation and maintenance, classified expenditures for operation and maintenance, and average annual expenditures during a period of years for permanent improvements in the school plant.

Data relative to expenditures are supplied by the annual reports of the United States Commissioner of Education. These reports show amounts paid for the different purposes grouped under operation and maintenance, amounts paid for permanent improvements, and total expenditure, including expenditures not elsewhere specified. As the accounting systems of the different cities to be compared are not on a uniform basis, the Commissioner of Education has been compelled to present the best information which could be secured by means of schedule

inquiries. Differences, as between the different cities, in the classification of accounts have undoubtedly affected the relative figures in minor respects, but the data are the best available. It is believed that the liability of error has been reduced by confining comparisons to expenditures for operation and maintenance and expenditures for improvements, thus omitting some miscellaneous items included under total expenditure. Presumably these last mentioned items are the ones that are most affected by differences in methods of accounting.

It is not easy to secure from the Commissioner's reports figures which are strictly comparable and which at the same time constitute a complete record of the educational activities of the different cities. In the present study the principal comparisons of cities will be based on expenditures made by the different school systems for schools of every type.*

The figures for Cleveland used in the comparisons are derived, for the most part, like the figures for other cities, from the reports of the United States Commissioner of Education, and differ slightly from

*The per capitas based on average daily attendance will be obtained by dividing expenditure for all schools by the number of pupils attending kindergartens, elementary schools, and secondary schools. It is impossible to obtain from the data available the precise distributions which might be desired as a basis for per capitas, and, while the procedure followed may be in theory open to criticism, a more complete classification would lead to very slight changes in the ratios. The comparisons that will be made will yield results that will be valid for the purposes for which they are to be used. For a further discussion of the data available and of the methods of computing per capitas, see the appendix.

corresponding figures compiled from the reports of the Clerk of the Board of Education and presented in earlier tables of the present report. The failure of correspondence is due to differences in classifica-

TABLE 5.--EXPENDITURE PER INHABITANT FOR OPERATION AND MAINTENANCE OF SCHOOLS IN CLEVELAND AND IN 17 OTHER CITIES OF FROM 250,000 TO 750,000 INHABITANTS. 1914

City	Estimated population in 1914 [a]	Expenditure for operation and maintenance		Rank in expenditure per inhabitant
		Total [b]	Per inhabitant	
Baltimore	579,590	$1,954,670	$3.37	17
Boston	733,802	5,516,762	7.52	2
Buffalo	454,112	2,449,533	5.39	12
Cleveland	**639,431**	**3,569,504**[c]	**5.58**	**9**
Detroit	537,650	2,553,488	4.75	14
Indianapolis	259,413	1,409,504	5.43	11
Jersey City	293,921	1,421,147	4.84	13
Kansas City	281,911	1,761,389	6.25	7
Los Angeles	438,914	3,706,519	8.45	1
Milwaukee	417,054	1,794,796	4.30	15
Minneapolis	343,466	2,147,856	6.25	6
Newark	389,106	2,699,239	6.94	3
New Orleans	361,221	1,097,552	3.04	18
Pittsburgh	564,878	3,602,303	6.38	5
San Francisco	448,502	1,879,187	4.19	16
Seattle	313,029	1,750,998	5.59	8
St. Louis	734,667	4,084,693	5.56	10
Washington	353,378	2,391,976	6.77	4
Average			$5.59	

[a] Estimates of Population, U. S. Bureau of the Census.

[b] Annual Report of the U. S. Commissioner of Education for 1914, Vol. II, Chap. II, Table 12.

[c] It will be noted that the Cleveland figures for expense differ from similar figures presented in Tables 1 and 2 of this report. Tables 1 and 2, which relate to a series of years, are compiled from figures available in the series of published reports of the Clerk of the Board of Education. In compiling Table 5 and subsequent tables, in order that the data for Cleveland might be comparable with data for other cities, the plan of classification employed by the U. S. Commissioner of Education has been followed. The figures for total expense appearing in this and subsequent tables have therefore, been taken from the Commissioner's report for 1914.

tion. It has been necessary to classify the Cleveland figures according to the plan adopted by the Commissioner in order to obtain results that may be compared fairly with those for other cities.

Expenditure and Population

Table 5 shows for 18 cities per capita expenditures for operation and maintenance, based on total population.

In annual expenditure per inhabitant for the operation and maintenance of schools Cleveland ranks ninth in the group of 18 cities. The per capita for Cleveland, $5.58, is almost precisely the average for all the cities of the group. Los Angeles, the city for which the highest figure is reported, spends half as much again as Cleveland, while New Orleans, the city lowest on the list, spends slightly more than half as much as Cleveland.

Expenditure and Wealth

Expenditures for operation and maintenance per $1,000 of wealth are shown in Table 6.

In expenditure per unit of wealth Cleveland ranks fifth among the 18 cities, or well above the half-way point. The actual expenditure for operation and maintenance per $1,000 of wealth is $4.72 for Cleveland, as compared with an average of $4.12 for the group of cities. San Francisco, the city for which the lowest figure is reported, spends less than one-third as much as Cleveland, while the expenditure

of Newark, the city ranking first, exceeds that of Cleveland by nearly one-half. It appears that, in relation to its resources, the city of Cleveland is liberal in its expenditure for the operation and maintenance of its schools. Measured by the prevailing standard, the community is more generous than otherwise.

TABLE 6.—EXPENDITURE PER $1,000 OF WEALTH FOR OPERATION AND MAINTENANCE OF SCHOOLS IN CLEVELAND AND IN 17 OTHER CITIES OF FROM 250,000 TO 750,000 INHABITANTS. 1914

City	Estimated true value of all property assessed [a]	Expenditure for operation and maintenance		Rank in expenditure per $1,000 of property assessed
		Total [b]	Per $1,000 of property assessed	
Baltimore	$723,800,340	$1,954,670	$2.70	17
Boston	1,489,608,820	5,516,762	3.70	11
Buffalo	494,200,459	2,449,533	4.96	3
Cleveland	**756,831,185**	**3,569,504**	**4.72**	**5**
Detroit	598,634,198	2,553,488	4.27	9
Indianapolis	363,413,650	1,409,504	3.88	10
Jersey City	257,644,605	1,421,147	5.52	2
Kansas City	371,191,014	1,761,389	4.75	4
Los Angeles	836,604,260	3,706,519	4.43	8
Milwaukee	511,720,797	1,794,796	3.51	14
Minneapolis	639,258,841	2,147,856	3.36	16
Newark	383,864,182	2,699,239	7.03	1
New Orleans	314,086,036	1,097,552	3.49	15
Pittsburgh	789,035,200	3,602,303	4.57	6
San Francisco	1,247,391,284	1,879,187	1.51	18
Seattle	473,174,995	1,750,998	3.70	12
St. Louis	1,125,308,749	4,084,693	3.63	13
Washington	538,389,607	2,391,976	4.44	7
Average			$4.12	

[a] U. S. Bureau of the Census, "Financial Statistics of Cities, 1913." The true value of property assessed has been estimated from the actual assessed value and the reported percentage relationship of the assessed value to the true value.

[b] Annual report of the U. S. Commissioner of Education for 1914, Vol. II, Chap. II, Table 12.

A city's resources represent, however, but one of the groups of factors which affect expenditure. In comparing cities, the occasion for spending as well as the sources of expenditure must be considered. A poor city, if its educational needs are very great, must make exceptional sacrifices in order to meet these needs, while a rich city with small educational demands may be tempted to spend very little per $1,000 of wealth. In making comparisons, therefore, expenditures must be related to the amount of work to be done. And as resources are represented by wealth, the element of work may be represented by the children to whom the community owes an education.

Every city owes an education to each child of school age in the community whose schooling is not being supplied by a private agency. In theory it should be possible to determine the way in which the different cities are meeting this responsibility by showing expenditure per child of school age not attending private or parochial schools. Existing data are not, however, sufficiently complete to afford a fair basis of comparison. There is a lack of trustworthy information as to the number of children of school age and as to the number of pupils attending private schools in the different cities.

Expenditure per Child in Average Daily Attendance

A comparison of expenditures per child of school age, if it were possible to make such a comparison,

would show the relation of expenditure to the work that the cities should do. The relation between expenditure and the work that is actually being done may best be represented by ratios showing expenditure per child in average daily attendance. Such a basis of comparison indicates the financial support on which the school authorities have to rely in seeking to educate the children who are actually in school. By computing a ratio of this sort, differences as between the different cities in the enforcement of attendance laws and in methods of measuring regularity of school attendance are eliminated. Figures comparing the amounts spent per child in average daily attendance for operation and maintenance and for improvements are presented in Table 7 and in Diagrams 3, 4, and 5.*

The comparisons made in Tables 5 and 6 relate solely to disbursement for the expenses of operation and maintenance—the expenditures incurred in carrying on a school system already established. In comparing expenditures per child in average daily attendance, outlays for the permanent improvement of the school plant are also considered. Expenditures for new buildings, grounds, and new equipment are the principal items included under outlay.

While in a large city outlay for improvements in the school plant must be, as has been pointed out, continuous, it may be expected to fluctuate from year

*In Table 7 ratios only are presented. The figures on which the ratios of Table 7 and of Tables 9 and 10 are based appear in Table 8.

TABLE 7.—EXPENDITURE FOR OPERATION AND MAINTENANCE OF SCHOOLS AND OUTLAY FOR IMPROVEMENT OF SCHOOL PLANT PER CHILD IN AVERAGE DAILY ATTENDANCE IN CLEVELAND AND IN 17 OTHER CITIES OF FROM 250,000 TO 750,000 INHABITANTS. 1914 [a]

City	Expenditure per child in average daily attendance for		Rank in expenditure per child in average daily attendance for	
	Operation and maintenance, 1913–14	Average annual outlay for new buildings, grounds, new equipment [b]	Operation and maintenance	Outlay
Baltimore	$32.54	$8.93	18	16
Boston	56.73	11.39 [c]	4	12
Buffalo	51.32	27.78 [d]	9	2
Cleveland	**46.38**	**13.81**	**12**	**10**
Detroit	44.66	17.73	14	7
Indianapolis	46.59	9.98 [d]	11	15
Jersey City	43.17	16.63 [c]	15	8
Kansas City	52.96	21.57	5	3
Los Angeles	64.78	16.49 [c]	1	9
Milwaukee	38.51	7.60	16	17
Minneapolis	52.70	18.84	6	5
Newark	50.25	19.19	10	4
New Orleans	33.07	4.93	17	18
Pittsburgh	58.97	12.13 [c]	3	11
San Francisco	45.08	34.89	13	1
Seattle	61.18	18.54	2	6
St. Louis	52.40	10.86 [c]	7	14
Washington	51.34	11.31 [d]	8	13
Average	$49.04	$15.60		

[a] Based on figures presented in Table 8.
[b] The averages are for the four-year period, 1911–14, except as otherwise specified.
[c] Average for three years for which data are available.
[d] Average for two years for which data are available.

to year. Even where a policy of steady building is pursued, the building of a single high school, or a slight falling off in the number of elementary schools constructed, may affect the figure for any given year

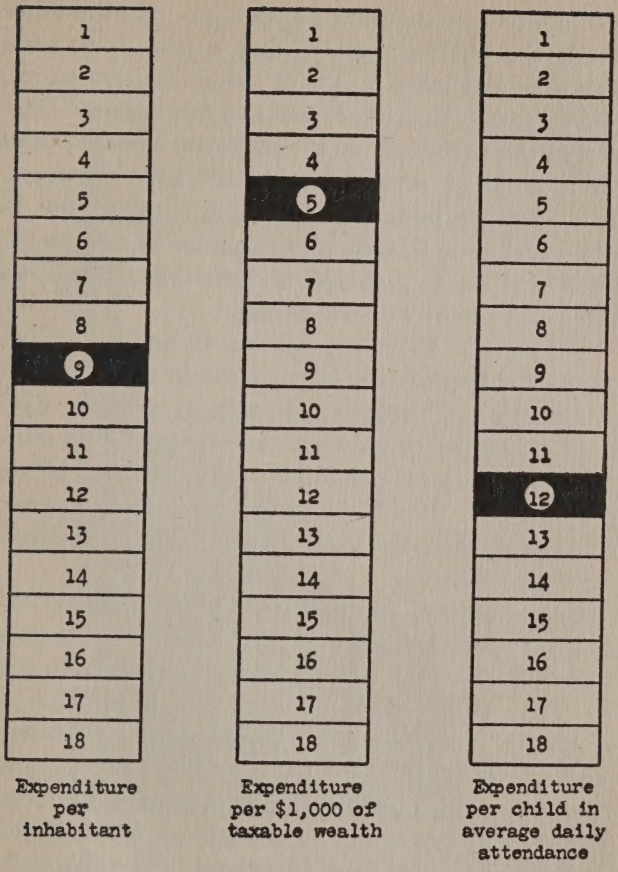


Diagram 3.—Rank of Cleveland in group of 18 cities in expenditure for operation and maintenance of schools per inhabitant, per $1,000 of taxable wealth, and per child in average daily attendance

by hundreds of thousands of dollars. On the other hand, the outlay made during a period of years serves as a reliable record of policy relative to improvements. In order to secure a fair basis for comparing the procedure of the different cities, outlays for a series of several years have been averaged. The averages presented in Table 7 relate, for 10 cities, including Cleveland, to a period of four years; for five cities to a period of three years; and for three cities to a two-year period.

Among the 18 cities, Cleveland ranks tenth in outlay for improvements per child in average daily attendance. Cleveland's average is seen to have been $13.81 per child, while the average for all cities of the same class was $15.60, or more than 12 per cent higher. It will be noted that, in the period considered, the cities varied widely as to expenditure for improvements.

Unlike outlay, expenditures for the various purposes of operation and maintenance may be assumed to be influenced but slightly by fluctuations from year to year. It is a significant fact that, in the amount paid for operation and maintenance, Cleveland stands low in the list of cities. Only six cities among the 18 for which information is presented spent less per child in average daily attendance for operation and maintenance than Cleveland. The figure for Cleveland is $46.38, as compared with an average of $49.04 for the group of cities.

Cleveland, which, for the operation and maintenance of its schools, spends as much per inhabitant

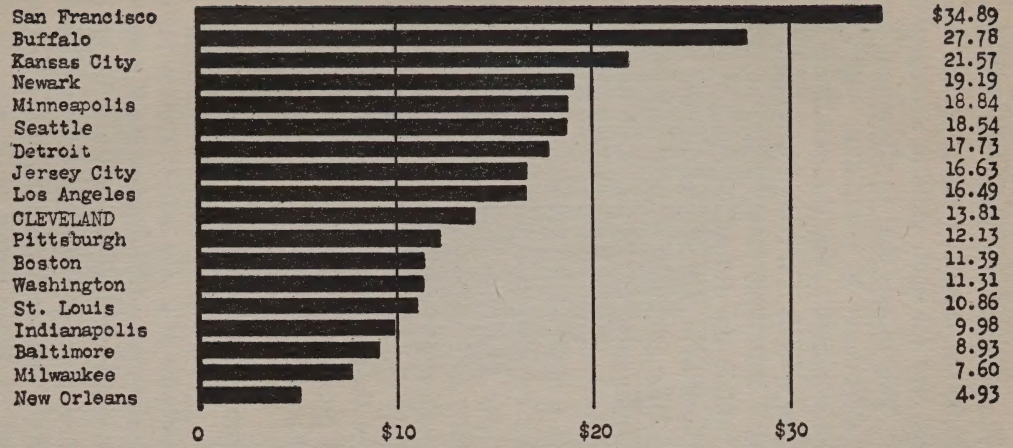


Diagram 4.—Average annual expenditure per child in average daily attendance for new buildings and other improvements in school plant, for Cleveland and for 17 other cities

as the average city, and more than the average city per $1,000 of taxable wealth, spends less than the average city for each child in average daily attendance. This means that in Cleveland the ratio of school attendance to population and to wealth is exceptionally high. For the number of children attending its schools, Cleveland is a small city and a poor city. But these facts, while they may, in a measure, explain the difficulties encountered by the school authorities in raising funds, do not remove the urgent need for adequate educational work nor relieve the community of the responsibility of providing money for building and operating public schools.

Diagram 3 shows the ranking of the 18 cities in expenditure for operation and maintenance per inhabitant, per $1,000 of wealth, and per child in average daily attendance.

Cleveland's relatively low expenditure per child in average daily attendance may be explained, in part, by the fact that the Board of Education does not supply all pupils with free text-books, as do some of the cities compared.

Classified Expenditures for Operation and Maintenance

The expenditure of a city school system for operation and maintenance is the aggregate of a number of items. A relatively low expenditure for all operation and maintenance may be due to small disbursements for all or a large proportion of the purposes represented by these items, or it may be due to

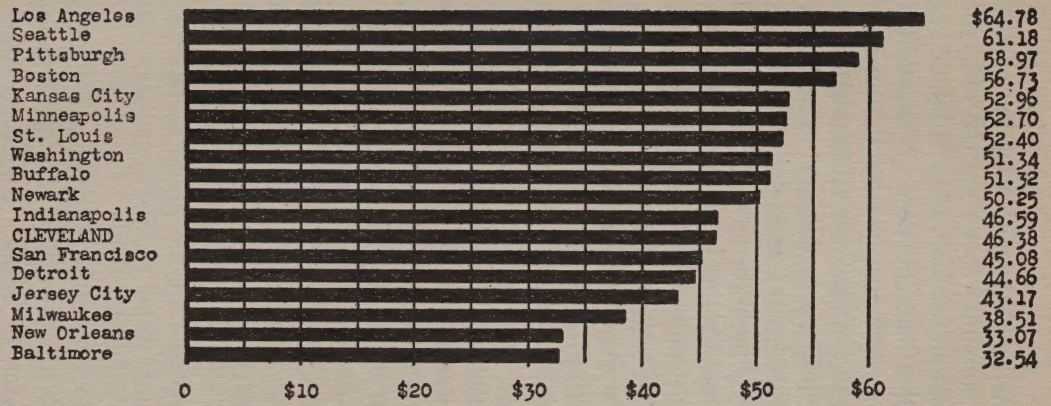


Diagram 5.—Expenditure per child in average daily attendance for operation and maintenance of public schools, for Cleveland and for 17 other cities

especially small disbursements for one or a few purposes. The amounts spent for the different items may reveal significant facts about a school system.

The detailed classification of expenditures according to purpose supplied by the reports of the United States Commissioner of Education is doubtless in minor respects inaccurate. Because of variations in the systems of accounting in use in the different cities and, perhaps, in some instances, because of the carelessness of local authorities in filling out schedules, expenditures which should have been charged to one educational activity may have been charged to another. In compiling and summarizing the comparative tables, the presence of this factor has not been overlooked. Where a city is known to have reported an expenditure improperly, or has failed to report any disbursement whatever for an essential educational activity, the data for this city either have been corrected, or have been disregarded in computing averages for the group of cities.

There is reason to believe, moreover, that in statistics of this type there is a compensation of errors —that where one city has included too much under a given category, another has included too little. It follows that comparisons between figures for Cleveland and averages for the group of cities are even more significant than comparisons between Cleveland and any one city.

In the reports of the Commissioner of Education, expenditures for operation and maintenance are classified under 15 heads. An examination of the

classification shows that the items differ widely in importance, and that certain items relate to activities which are included in school expenditures in some cities, but are either omitted altogether or otherwise cared for in other cities. Cities differ as to the free provision of text-books for children and as to the maintenance of school libraries. While nearly all cities seek to protect the health of children attending the public schools, in some instances this work is carried on by the city department of public health, and the expenditures made do not appear in the accounts showing disbursements for school purposes. In some cities the schools pay for their water supply; in others the water is supplied by the municipality. The necessity for such activities as transportation of pupils varies from city to city.

On the other hand, all cities provide, and must provide, if they are to have schools, for the salaries of a superintendent, of principals, and of teachers; for the repair and heating of buildings; and for the maintenance of administrative offices. As the variations mentioned affect the comparability of data, expenditures for Cleveland and the other cities will be shown only for items representing activities essential to the operation of the public schools which are everywhere administered by the educational authorities.

Tables 8, 9, and 10 show expenditure per child in average daily attendance for Cleveland and 17 other cities of similar size for each of the following purposes:

TABLE 8.—PUPILS IN AVERAGE DAILY ATTENDANCE IN DAY SCHOOLS AND CLASSIFIED EXPENDITURE FOR SCHOOLS IN CLEVELAND AND IN 17 OTHER CITIES OF FROM 250,000 TO 750,000 INHABITANTS. 1914 [a]

City	Pupils in average daily attendance	Expenditure for				
		Office of board and other business offices	Superintendent's office	Salaries and expenses of supervisors	Salaries and expenses of principals	Salaries of teachers
Baltimore	60,078	$16,640	$37,570	$8,466	$152,369	$1,360,795
Boston	97,248	183,961	107,640	85,575	320,187	3,553,300
Buffalo	47,730	16,999	36,330	30,900	159,313	1,524,806
Cleveland	**76,972**	**143,285**	**39,628**	**45,156**	**173,329**	**2,266,308**
Detroit	57,175	31,045	6,074	42,113	206,290	1,720,444
Indianapolis	30,253	35,551	22,466	48,108	70,435	839,267
Jersey City	32,916	14,177	35,459	15,022	111,245	930,189
Kansas City	33,259	69,317	36,185	19,254	143,201	1,079,963
Los Angeles	57,211	128,163	43,801	69,342	295,471	2,599,484
Milwaukee	46,605	18,243	32,978	14,759	142,444	1,275,897
Minneapolis	40,759	24,739	17,729	26,029	127,900	1,408,052
Newark	53,717	60,005	51,597	40,453	198,048	1,824,394
New Orleans	33,188	18,860	12,991	6,938	72,802	817,698
Pittsburgh	61,090	176,084	77,364	93,042	278,501	1,945,161
San Francisco	41,683	32,417	18,376	11,880	181,200	1,421,036
Seattle	28,622	21,179	26,823	12,212	4,826 [b]	1,286,761 [b]
St. Louis	77,951	190,976	80,712	66,245	273,701	2,340,640
Washington	46,591	15,226	24,086	36,148	105,035	1,722,533

[a] The data for the 17 cities other than Cleveland, and the Cleveland data for children in average daily attendance, for total expense and total outlay, and for some of the itemized purposes, are from the Annual Report of the U. S. Commissioner of Education for 1914, Vol. II, Chap. II, Tables 10 and 12. The Cleveland figures presented for five classes of expenditure, expenditure for office of board and other business offices, for superintendent's office, for salaries and expenses of principals, for salaries of teachers, and for maintenance, repairs, replacement of equipment, etc., differ from the corresponding figures of the Commissioner's report, having been compiled from a detailed classification made in the office of the Clerk of the Board of Education which had not been completed at the time the Commissioner's schedule was filled out.

[b] For Seattle the salaries of principals are included with salaries of teachers.

TABLE 8.—(Concluded)

City	Expenditure for					
	Stationery, supplies, and other instruction expenses	Wages of janitors and other employees	Fuel	Maintenance—repairs, replacement of equipment, etc.	Expenditure for total operation and maintenance, including other payments	Average annual outlay for new buildings, grounds, new equipment [c]
Baltimore	$56,377	$145,519	$61,644	$28,579	$1,954,670	$508,000
Boston	151,012	332,103	127,306	371,106	5,516,762	1,079,367 [d]
Buffalo	98,814	155,278	73,607	204,257	2,449,533	1,320,758 [e]
Cleveland	**64,839**	**302,126**	**103,332**	**228,511**	**3,569,504**	**945,845** [f]
Detroit	76,350	239,248	68,674	98,879	2,553,488	888,195
Indianapolis	49,841	88,574	45,842	70,178	1,409,504	294,275 [e]
Jersey City	44,948	88,811	37,954	50,364	1,421,147	528,855 [d]
Kansas City	41,240	93,003	58,007	33,160	1,761,389	659,683
Los Angeles	105,600	163,526	25,011	151,822	3,706,519	844,035 [d]
Milwaukee	46,158	103,191	51,848	..	1,794,796	310,313
Minneapolis	85,414	126,675	73,872	152,895	2,147,856	746,160
Newark	107,095	154,518	48,953	46,718	2,699,239	963,918
New Orleans	..	53,096	12,164	40,966	1,097,552	158,481
Pittsburgh	146,006	293,426	92,931	287,454	3,602,303	664,875 [d]
San Francisco	56,186	125,399	7,867	..	1,879,187	1,373,853
Seattle	63,603	117,533	40,803	59,664	1,750,998	495,872
St. Louis	106,700	263,948	44,579	499,213	4,084,693	782,931 [d]
Washington	58,433	133,213	74,616	110,101	2,391,976	526,091 [e]

[c] The averages are for the four-year period, 1910–14, except as otherwise specified.
[d] Average for three years for which data are available.
[e] Average for two years for which data are available.
[f] The figure for Cleveland for 1913–14, $971,641, includes $39,907 spent for the maintenance of the architect's department.

TABLE 9.—CLASSIFIED EXPENDITURES PER CHILD IN AVERAGE DAILY ATTENDANCE FOR CLEVELAND AND FOR 17 OTHER CITIES OF FROM 250,000 TO 750,000 INHABITANTS. 1914 [a]

City	Expenditure per child in average daily attendance for								
	Office of board and other business offices	Superintendent's office	Salaries and expenses of supervisors	Salaries and expenses of principals	Salaries of teachers	Stationery, supplies, and other instruction expenses	Wages of janitors and other employees	Fuel	Maintenance—repairs, replacement of equipment, etc.
Baltimore	$.28	$.63	$.14	$2.54	$22.65	$.94	$2.42	$1.03	$.48
Boston	1.89	1.11	.88	3.29	36.54	1.55	3.42	1.31	3.82
Buffalo	.36	.76	.65	3.34	31.95	2.07	3.25	1.54	4.28
Cleveland	**1.86**	**.52**	**.59**	**2.25**	**29.44**	**.84**	**3.93**	**1.34**	**2.97**
Detroit	.54	.11	.74	3.61	30.09	1.34	4.18	1.20	1.73
Indianapolis	1.18	.74	1.59	2.33	27.74	1.65	2.93	1.52	2.32
Jersey City	.43	1.08	.46	3.38	28.26	1.37	2.70	1.15	1.53
Kansas City	2.08	1.09	.58	4.31	32.47	1.24	2.80	1.74	1.00
Los Angeles	2.24	.77	1.21	5.16	45.44	1.85	2.86	.44	2.65
Milwaukee	.39	.71	.32	3.06	27.38	.99	2.21	1.11	.. [c]
Minneapolis	.61	.43	.64	3.14	34.55	2.10	3.11	1.81	3.75
Newark	1.12	.96	.75	3.69	33.96	1.99	2.88	.91	.87
New Orleans	.57	.39	.21	2.19	24.64	.. [c]	1.60	.37	1.23
Pittsburgh	2.88	1.27	1.52	4.56	31.84	2.39	4.80	1.52	4.71
San Francisco	.78	.44	.29	4.35	34.09	1.35	3.01	.19	.. [c]
Seattle	.74	.94	.43	.17 [b]	44.96 [b]	2.22	4.11	1.43	2.08
St. Louis	2.45	1.04	.85	3.51	30.03	1.37	3.39	.57	6.40
Washington	.33	.52	.78	2.25	36.97	1.25	2.86	1.60	2.36
Average	$1.15	$.75	$.70	$3.35 [b]	$31.65 [b]	$1.56 [c]	$3.14	$1.15	$2.64 [c]

For footnotes see page 43.

Office of board and other business offices
Superintendent's office
Salaries and expenses of supervisors
Salaries and expenses of principals
Salaries of teachers
Stationery, supplies, and other instruction expenses
Wages of janitors and other employees
Fuel
Maintenance—repairs, replacement of equipment, etc.

The data of Table 8, which may be regarded as a fundamental table, are summarized in Tables 9 and 10 and in Diagram 6. Table 9 compares Cleveland's expenditure per child in average daily attendance for each item of operation and maintenance with the expenditures of the other cities and with the averages for all the cities.

It will be seen that Cleveland's expenditure was above the average for four of the items considered, and below the average for five. The items for which Cleveland spent more than the average city are:

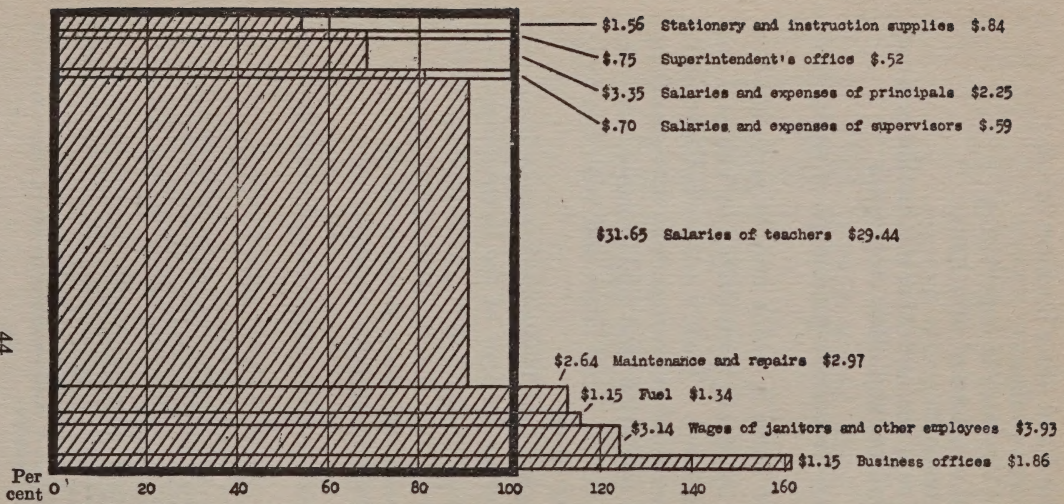
Office of board and other business offices
Wages of janitors and other employees
Fuel
Maintenance—repairs, replacement of equipment, etc.

Footnotes to Table 9.

[a] Based on figures presented in Table 8.

[b] The figure reported for Seattle under "salaries and expenses of principals" includes expenses only, salaries being included in the figure reported for "salaries of teachers." The averages computed for "salaries and expenses of principals" and for "salaries of teachers" are based on figures for the 17 cities other than Seattle.

[c] No expenditure for "stationery, supplies and other instruction expenses" is reported for New Orleans, and no expenditure for "maintenance—repairs, replacement of equipment, etc." is reported for Milwaukee or for San Francisco. The average computed for stationery, supplies, etc., is based on figures for the 17 cities other than New Orleans; the average for the maintenance item is based on figures for the 16 cities other than Milwaukee and San Francisco.



The area of the square represents the per capita expenditure of the average city for all principal items of operation and maintenance. Expenditures for each of the nine items are indicated by the areas of the horizontal rectangles into which the square is divided, while Cleveland's expenditures for these same items are represented by the areas of the shaded rectangles. For any given item, the ratio of Cleveland's expenditure to the expenditure of the average city is shown by the ratio of the shaded portion of the rectangle to the width of the square. The sum of the shaded areas represents Cleveland's total per capita expenditure for the nine items. Of the figures accompanying the titles, the first indicates the expenditure of the average city, and the second Cleveland's expenditure.

Diagram 6.—Cleveland's expenditure per child in average daily attendance for nine principal items of operation and maintenance, compared with average expenditures for a group of 18 cities

TABLE 10.—RANK OF CLEVELAND AND 17 OTHER CITIES OF FROM 250,000 TO 750,000 INHABITANTS IN CLASSIFIED EXPENDITURES FOR SCHOOL PURPOSES PER CHILD IN AVERAGE DAILY ATTENDANCE. 1914 [a]

City	Rank in expenditure per child in average daily attendance for								
	Office of board and other business offices	Superintendent's office	Salaries and expenses of supervisors	Salaries and expenses of principals	Salaries of teachers	Stationery, supplies, and other instruction expenses	Wages of janitors and other employees	Fuel	Maintenance—repairs, replacement of equipment, etc.
Baltimore	18	12	18	13	17	16	16	13	16
Boston	5	2	4	10	3	8	5	9	4
Buffalo	16	9	9	9	8	4	7	4	3
Cleveland	**6**	**14**	**11**	**16**	**12**	**17**	**4**	**8**	**6**
Detroit	13	18	8	6	10	12	2	10	11
Indianapolis	7	10	1	14	14	7	10	6	9
Jersey City	14	4	13	8	13	10	15	11	12
Kansas City	4	3	12	4	7	14	14	2	14
Los Angeles	3	8	3	1	1	6	13	16	7
Milwaukee	15	11	15	12	15	15	17	12	.. [c]
Minneapolis	11	16	10	11	4	3	8	1	5
Newark	8	6	7	5	6	5	11	14	15
New Orleans	12	17	17	17	16	.. [c]	18	17	13
Pittsburgh	1	1	2	2	9	1	1	5	2
San Francisco	9	15	16	3	5	11	9	18	.. [c]
Seattle	10	7	14	.. [b]	.. [b]	2	3	7	10
St. Louis	2	5	5	7	11	9	6	15	1
Washington	17	13	6	15	2	13	12	3	8

[a] Based on figures presented in Table 8.

[b] Seattle has been disregarded in ranking cities according to expenditure for salaries and expenses of principals and salaries of teachers. See notes to Tables 8 and 9.

[c] New Orleans has been disregarded in ranking cities according to expenditure for stationery, supplies, and other instruction expenses, and Milwaukee and San Francisco have been disregarded in ranking cities according to expenditure for maintenance. See note to Table 9.

Cleveland spent less than the average city for:

Superintendent's office
Salaries and expenses of supervisors
Salaries and expenses of principals
Salaries of teachers
Stationery, supplies, and other instruction expenses

In Table 10 the cities are ranked according to their expenditures for the various items. In four items of expenditure Cleveland is in the group of nine cities which spend most for these particular items; in five items of expenditure Cleveland is in the group of cities spending least. The items in expenditure for which Cleveland ranks in the first group are those in which the city's expenditure has been seen to be above the average; those in expenditure for which Cleveland ranks in the second group are the items in which its expenditure is below the average.

According to the figures just cited it might appear that Cleveland's rank was at about the half-way mark—that the items for which the city spent more than the average would, in a way, counterbalance those in which the expenditure was below the average. But it has been seen that, in total expenditure for operation and maintenance, Cleveland ranks low in the group of cities. The facts presented are not mutually inconsistent. This is because the statements that have been made as to the rank of the city in different items of expenditure fail to take into account the relative importance of the different purposes which these items represent.

Expenditure for Teachers' Salaries

A glance at Table 8 shows that the salaries of teachers constitute the chief element of educational expenditure. For the group of cities considered together, this item consumed nearly two-thirds of the total expense of operation and maintenance and over half the combined expenditure for operation, maintenance, and average annual outlay. The ranking of Cleveland as to expenditure for salaries of teachers is, clearly, far more significant than the city's position according to expenditure for some other purposes.

It appears from the figures of the tables that, as compared with other cities, Cleveland spends very little money for teachers' salaries. The per capita is $29.44, while the average for the group of cities is $31.65. Table 10 shows that in this item of expenditure Cleveland occupies twelfth place among the 17 cities for which rankings are given. Los Angeles, the city which spends most for teachers' salaries, spends 54 per cent more than Cleveland; the five cities spending less are Jersey City, Indianapolis, Milwaukee, New Orleans, and Baltimore.

The figures just cited are for the school year 1913–14, and in the autumn of 1914 the Cleveland teachers were granted an increase in compensation. It appears from data supplied by the Clerk of the Board of Education that in 1914–15 the expenditure for teachers' salaries was $2,570,651, a substantial increase over the figure for the preceding year, $2,266,308. But from 1913–14 to 1914–15 the number of

children in average daily attendance advanced from 76,972 to 82,515. A computation shows that the expenditure per child in average daily attendance increased from $29.44 to $31.15. The per capita expenditure of the average city for teachers' salaries in 1913–14 was, however, $31.65; hence, even if it be assumed that in cities other than Cleveland expenditure for teachers' salaries per child in average daily attendance did not increase from 1913–14 to 1914–15, Cleveland's expenditure for 1914–15 was below the average for the group of cities.

But the assumption that, while in Cleveland salaries have advanced, salaries in other cities have remained stationary, is a wholly unwarranted assumption. The salaries of teachers are everywhere increasing and there is reason to believe that in the period under consideration the advance was no more rapid in Cleveland than in some of the other cities included in the comparison. Hence, it seems not improbable that Cleveland's relative position with respect to expenditure for teachers' salaries was no better in 1914–15 than in the preceding year.

A low expenditure for teachers' salaries per child in average daily attendance may be due to the employment of a small number of teachers with overcrowded classes, to low salaries, or to a combination of these two causes. Whether or not the first cause is operative in Cleveland may be seen by comparing the number of children in average daily attendance per teacher employed with corresponding ratios

for the 18 other cities for which data are available.*

TABLE 11.—AVERAGE SIZE OF CLASSES IN ELEMENTARY SCHOOLS AND KINDERGARTENS IN CLEVELAND AND IN 18 OTHER CITIES OF FROM 250,000 TO 750,000 INHABITANTS. 1914 [a]

City	Teachers employed	Children in average daily attendance		Rank in number of teachers per 1,000 children
		Number	Number per teacher	
Baltimore	1,684	55,713	33.1	11
Boston	2,299	83,678	36.4	16
Buffalo	1,573	44,057	28.0	2
Cincinnati	1,230	36,104	29.4	4
Cleveland	**1,800**	**67,293**	**37.4**	**17**
Detroit	1,534	51,580	33.6	12
Indianapolis	854	26,421	30.9	8
Jersey City	781	30,023	38.4	19
Kansas City	958	28,897	30.2	6
Los Angeles	1,807	48,515	26.8	1
Milwaukee	1,210	42,515	35.1	14
Minneapolis	1,120	34,552	30.8	7
Newark	1,463	50,472	34.5	13
New Orleans	1,064	31,268	29.4	5
Pittsburgh	1,799	55,723	31.0	9
San Francisco	1,081	38,485	35.6	15
Seattle	757	23,966	31.7	10
St. Louis	1,882	71,992	38.3	18
Washington	1,426	40,821	28.6	3
Average			32.6	

[a] The figures for Cleveland are from the 1913–14 report of the Superintendent of Schools; those for the other 18 cities are from the Annual Report of the U. S. Commissioner of Education for 1914, Vol. II, Chap. II, Table 9.

* As data relative to the number of teachers employed and the number of pupils in average daily attendance are available for Cincinnati, it is possible to present comparative figures for all the 19 cities having in 1913 from 250,000 to 750,000 inhabitants.

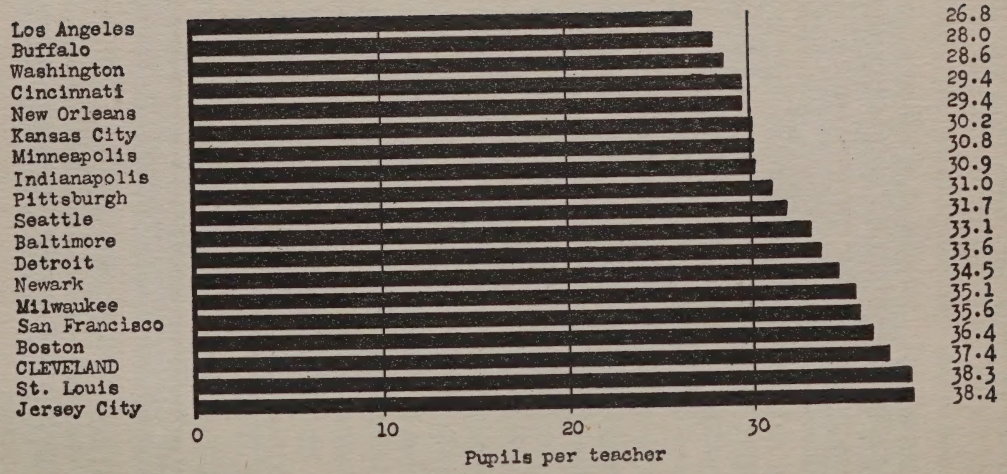


Diagram 7.—Pupils in average daily attendance in elementary schools, per teacher employed, for Cleveland and for 18 other cities

Data for Cleveland are found in the report of the Superintendent of Schools, while the most recent annual report of the United States Commissioner of Education gives the figures for the remaining cities. Table 11 shows the number of pupils per teacher in elementary schools and kindergartens.

TABLE 12.—AVERAGE SIZE OF CLASSES IN SECONDARY SCHOOLS IN CLEVELAND AND IN 18 OTHER CITIES OF FROM 250,000 TO 750,000 INHABITANTS. 1914 *

City	Teachers employed	Children in average daily attendance		Rank in number of teachers per 1,000 children
		Number	Number per teacher	
Baltimore	228	4,365	19.1	7
Boston	505	13,570	26.9	18
Buffalo	163	3,673	22.5	15
Cincinnati	188	3,863	20.5	13
Cleveland	**354**	**7,164**	**20.2**	**11**
Detroit	285	5,594	19.6	9
Indianapolis	167	3,832	22.9	16
Jersey City	124	2,893	23.3	17
Kansas City	228	4,362	19.1	6
Los Angeles	480	8,696	18.1	1
Milwaukee	220	4,090	18.6	3
Minneapolis	288	6,207	21.6	14
Newark	173	3,245	18.8	5
New Orleans	95	1,920	20.2	12
Pittsburgh	288	5,367	18.6	4
San Francisco	118	3,198	27.1	19
Seattle	235	4,656	19.8	10
St. Louis	311	5,959	19.2	8
Washington	316	5,770	18.3	2
Average			20.8	

* The figures for Cleveland are from the 1913–14 report of the Superintendent of Schools; those for the other 18 cities are from the Annual Report of the U. S. Commissioner of Education for 1914, Vol. II, Chap. II, Table 9.

In Cleveland the number of pupils per teacher in

elementary schools and kindergartens—and it may be assumed that this ratio represents, roughly, the average size of the class—is distinctly larger than in the average city. Stating the matter in another way, in order that the cities in which conditions are most favorable may appear at the head of the list, Cleveland employs, in elementary schools and kindergartens, a relatively small number of teachers per 1,000 children in average daily attendance. With the 19 cities ranked in descending order according to the number of teachers per 1,000 pupils, Cleveland occupies the seventeenth place. The ratio of teachers to pupils is shown for secondary schools in Table 12.

The classes in Cleveland's secondary schools are slightly smaller than those of the average city. In the list of cities, ranked in descending order according to the number of teachers per 1,000 pupils, Cleveland occupies eleventh place. Clearly the situation in the secondary schools is much better than that in the elementary schools. But, as the proportion of secondary school pupils is small everywhere, small classes in secondary schools will by no means make up for overcrowding in the elementary grades. The conditions shown to prevail at Cleveland are, as all educational authorities will agree, unfavorable to efficient classroom work.

But the quality of classroom work is affected by the ability of teachers even more than by their abundance. And, while the abilities of school teachers are not always directly proportional to

the salaries they receive, still, with practically free competition prevailing among the cities of the country for the services of well-qualified instructors, the cities that pay the highest salaries will, in the long run, obtain the highest grade of teaching. Does Cleveland, by offering attractive salaries, endeavor to secure and hold competent teachers? This question may be answered by an examination of the average salaries of teachers in different cities. Comparative figures are presented in Table 13.

TABLE 13.—ANNUAL SALARIES OF TEACHERS IN CLEVELAND AND IN 13 OTHER CITIES OF MORE THAN 250,000 INHABITANTS [a]

City	Median [b] annual salaries of regular teachers in		Rank in median [b] salaries of regular teachers in	
	Elementary schools	Secondary schools	Elementary schools	Secondary schools
Baltimore	$700	$1,200	13 or 14	12
Boston	1,176	1,620	2	4
Chicago	1,175	1,600	3	5
Cincinnati	1,000	1,300	5, 6, or 7	10
Cleveland	**900**	**1,500**	**8 or 9**	**7**
Indianapolis	875	1,100	11	13 or 14
Milwaukee	876	1,260	10	11
Minneapolis	1,000	1,400	5, 6, or 7	8 or 9
Newark	1,000	1,900	5, 6, or 7	1
New Orleans	700	1,100	13 or 14	13 or 14
Philadelphia	900	1,400	8 or 9	8 or 9
San Francisco	1,200	1,680	1	3
St. Louis	1,032	1,520	4	6
Washington	750	1,800	12	2
Average of medians	$949	$1,456		

[a] Data for Cleveland from payroll for 1914–15; data for other cities, for 1913–14, from "Tangible Rewards of Teaching," U. S. Bureau of Education.

[b] With teachers ranked in descending order according to size of salaries, the "median" salary is the salary received by the teacher half way down the list.

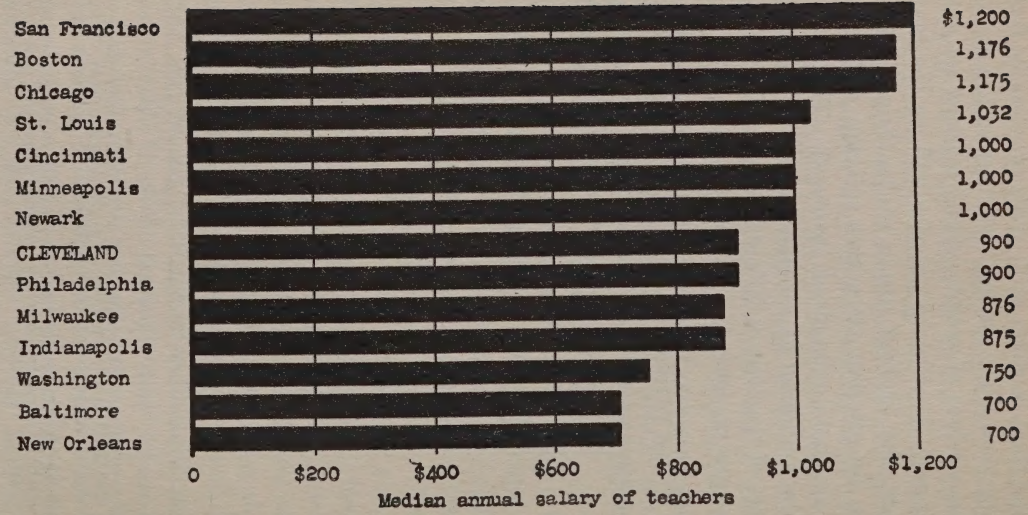


Diagram 8.—Median annual salaries of teachers in elementary schools, for Cleveland and for 13 other cities

The figures for Cleveland are from a 1914–15 payroll supplied by the office of the Director of Schools; those for other cities are from a 1913–14 report of the United States Commissioner of Education, entitled "The Tangible Rewards of Teaching." The salary data of "The Tangible Rewards of Teaching" are better classified and more in detail than those supplied by the Commissioner's annual reports, and hence are to be preferred. Figures are available for but 12 cities in the population group considered in earlier tables, but, in order to obtain a broader basis of comparison, Chicago and Philadelphia have been added to the list.

Among the 14 cities, Cleveland ranks seventh in salaries paid in secondary schools and eighth or ninth in salaries paid in elementary schools. Half the teachers in Cleveland's secondary schools earn $1,500 a year or less, the comparable figure for the group of cities being $1,456; half the teachers in Cleveland's elementary schools earn $900 a year or less, while the comparable figure for all the cities is $949. It would seem that in Cleveland the salaries of teachers, both in secondary and in elementary schools, are neither exceptionally high nor exceptionally low.

But the comparisons just made are unduly favorable to Cleveland. As has been stated, the figures for Cleveland presented in Table 13 are for 1914–15, while the figures for the other cities are for 1913–14. In the fall of 1914 the salaries of Cleveland teachers were advanced. A comparison of the Cleveland

figures for a period after the increase became effective with earlier figures for other cities is valid only on the assumption that, while salaries in Cleveland advanced, salaries elsewhere remained at their former level. And as teachers' salaries are everywhere tending upward, such an assumption is unwarranted. If the 1914–15 data for Cleveland could be compared with 1914–15 data for other cities, it seems not improbable that Cleveland would occupy a relative position lower than is indicated by Table 13.

As expenditure for teachers' salaries constitutes so large a proportion of the total expenditure for schools, and in view of the direct and intimate bearing which salaries are believed to have upon the quality of classroom instruction, it seems worth while to present the available information in somewhat greater detail. Table 14 shows, for each of the cities included in the comparison, the salaries of the regular teachers in elementary schools who, if all the teachers of the city were ranked in ascending order according to annual salaries, would stand, respectively, one-tenth, three-tenths, five-tenths, seven-tenths, and nine-tenths of the way through the list. For secondary school teachers similar information is given in Table 15.

It appears from Table 14 that the proportion of teachers in elementary schools receiving the lowest salaries is larger in Cleveland than in most cities. On the other hand, the teachers receiving the higher salaries are about as well paid in Cleveland as in the

average city. The range of salaries in elementary schools is a wide one. Table 15 shows that in Cleveland the distribution of salaries of teachers in high schools corresponds very closely to the average for the group of cities.

TABLE 14.—DISTRIBUTION OF ANNUAL SALARIES OF REGULAR TEACHERS IN ELEMENTARY SCHOOLS IN CLEVELAND AND IN 13 OTHER CITIES OF MORE THAN 250,000 INHABITANTS [a]

City	Salaries not exceeding the amounts specified were earned by teachers bearing to the aggregate number employed in each city the proportion of				
	10 per cent	30 per cent	50 per cent	70 per cent	90 per cent
Baltimore	$600	$700	$700	$750	$800
Boston	648	840	1,176	1,176	1,224
Chicago	675	975	1,175	1,175	1,200
Cincinnati	700	900	1,000	1,000	1,000
Cleveland	**600**	**750**	**900**	**1,000**	**1,000**
Indianapolis	475	625	875	925	925
Milwaukee	876	876	876	876	876
Minneapolis	750	950	1,000	1,000	1,000
Newark	630	780	1,000	1,100	1,300
New Orleans	500	600	700	750	800
Philadelphia	630	780	900	940	1,000
San Francisco	840	1,164	1,200	1,224	1,224
St. Louis	700	1,032	1,032	1,032	1,120
Washington	625	700	750	890	980
Average	$661	$834	$949	$988	$1,032

[a] Data for Cleveland from payroll for 1914–15; data for other cities, for 1913–14, from "Tangible Rewards of Teaching," U. S. Bureau of Education.

While of first importance, because it constitutes so large a part of the total expenditure for school purposes, and because of its intimate bearing on the quality of classroom service rendered, expense of teachers' salaries is not by any means the only item

in which Cleveland stands low among the 18 cities. According to Table 10, only four of the cities spend less than Cleveland on the office of a superintendent of schools; only one spends less on salaries of principals; and no city spends less on stationery, supplies, and other expenses of instruction.

TABLE 15.—DISTRIBUTION OF ANNUAL SALARIES OF REGULAR TEACHERS IN SECONDARY SCHOOLS IN CLEVELAND AND IN 13 OTHER CITIES OF MORE THAN 250,000 INHABITANTS [a]

City	Salaries not exceeding the amounts specified were earned by teachers bearing to the aggregate number employed in each city the proportion of				
	10 per cent	30 per cent	50 per cent	70 per cent	90 per cent
Baltimore	$780	$1,000	$1,200	$1,300	$1,800
Boston	1,044	1,260	1,620	1,908	3,060
Chicago	1,100	1,400	1,600	1,800	2,300
Cincinnati	900	1,100	1,300	1,800	2,300
Cleveland	**1,100**	**1,300**	**1,500**	**1,800**	**2,000**
Indianapolis	900	1,000	1,100	1,200	1,500
Milwaukee	1,260	1,260	1,260	1,260	1,380
Minneapolis	1,100	1,300	1,400	1,500	1,600
Newark	1,400	1,600	1,900	2,100	2,500
New Orleans	750	900	1,100	1,150	1,400
Philadelphia	1,000	1,250	1,400	1,600	2,500
San Francisco	1,680	1,680	1,680	2,040	2,040
St. Louis	1,120	1,300	1,520	1,700	2,100
Washington	1,300	1,600	1,800	1,800	1,800
Average	$1,102	$1,282	$1,456	$1,640	$2,020

[a] Data for Cleveland from payroll for 1914–15; data for other cities, for 1913–14, from "Tangible Rewards of Teaching," U. S. Bureau of Education.

Expenditure for the salaries of principals is an item which, like teachers' salaries, may be expected vitally to affect the quality of educational work. In Cleveland and elsewhere a very large proportion

of all the principals employed are principals of elementary schools. It seems inadvisable to go into the matter of the relationship between the number of principals and the number of pupils in average daily attendance, but some attention may be given to salaries. Does Cleveland pay to elementary school principals compensation calculated to secure the most efficient service? This question may be answered by reference to Table 16, which shows salaries of principals by the method employed in Tables 14 and 15 to show salaries of teachers.

TABLE 16.—DISTRIBUTION OF ANNUAL SALARIES OF PRINCIPALS IN ELEMENTARY SCHOOLS IN CLEVELAND AND IN 13 OTHER CITIES OF MORE THAN 250,000 INHABITANTS [a]

City	Salaries not exceeding the amounts specified were earned by principals bearing to the aggregate number employed in each city the proportion of				
	10 per cent	30 per cent	50 per cent	70 per cent	90 per cent
Baltimore	$1,900	$2,000	$2,000	$2,000	$2,000
Boston	2,580	2,940	3,300	3,300	3,300
Chicago	1,800	2,600	2,800	3,100	3,100
Cincinnati	1,800	1,900	2,200	2,400	2,400
Cleveland	**1,320**	**1,480**	**1,560**	**1,650**	**1,840**
Indianapolis	950	1,100	1,300	1,500	1,800
Milwaukee	1,980	1,980	1,980	1,980	1,980
Minneapolis	1,100	1,300	1,600	1,800	2,100
Newark	2,000	2,400	2,600	2,900	3,000
New Orleans	900	1,150	1,250	1,300	1,350
Philadelphia	1,100	1,510	1,600	2,380	2,500
San Francisco	1,560	1,800	1,800	2,160	2,340
St. Louis	1,220	2,000	2,500	3,000	3,000
Washington	1,130	1,310	1,510	1,540	1,890
Average	$1,524	$1,819	$2,000	$2,215	$2,329

[a] Data for Cleveland from payroll for 1914–15; data for other cities, for 1913–14, from "Tangible Rewards of Teaching," U. S. Bureau of Education.

It appears from the table that the salaries of Cleveland's elementary school principals are below the prevailing standard. While the proportion of principals receiving the smaller salaries is not exceptionally large at Cleveland, the proportion earning the higher salaries appears to be distinctly smaller than in most cities. For Cleveland the median salary, which corresponds, roughly, to the average, is $1,560, the comparable figure for the group of cities being $2,000.

Of the items for which Cleveland spends more than most cities of the same population class, two—expenditure for the "office of board and other business offices" and expenditure for "wages of janitors and other employees"—require special mention. It may be objected that, by reason of variations in the classification of accounts, these headings may include different activities in the different cities, and that for a relatively large expenditure Cleveland may receive services compensation for which is reported by other cities under different heads.

Cleveland's expenditure for the "office of board and other business offices" is reported as $1.86 per child in average daily attendance, while the corresponding figure for the group of 18 cities is $1.15. But the Cleveland Board of Education maintains an architect's department, which performs the services that in many cities are performed by private architects and paid for as a part of the cost of new construction. Clearly, if in Cleveland the expense of the architect's department is included in ex-

penditure for "office of board and other business offices," the Cleveland per capita is not properly comparable with the per capitas for other cities. This source of difficulty, and of possible objection, disappears, however, when it is found, from a study of the schedule filled out by the local authorities for the United States Commissioner of Education, that the total expenditure for the architect's department for the year 1913–14, amounting to $39,907, was charged, not to any item of operation or maintenance, but, as it properly should have been, to "outlay for new buildings, grounds, new equipment."

For wages of janitors and other employees Cleveland is reported to have spent $3.93 per child in average daily attendance, as compared with an average for the group of cities of but $3.14. The question arises: Does the expenditure reported for Cleveland include the compensation of any employees rendering services remuneration for which is included by other cities under different items of expense? In seeking to answer this question, the amounts paid custodians in the Cleveland school for the school year 1914–15 have been totalled. The figure obtained, which represents janitor service, expense for which must be incurred in all school systems, is $275,689. Presumably the expense for janitor service was greater in 1914–15 than in 1913–14, the year for which figures are presented in Table 9. But, if it be assumed that expense for janitor service increased at the same rate as the number of children in average daily attendance, Cleveland's

per capita expenditure for this purpose alone must have been relatively high in 1913–14, the year for which the comparative figures are given. The number of children in average daily attendance was 82,515 in 1914–15 and 76,972 in 1913–14. A proportionate deduction from $275,689, the amount spent for janitor service in 1914–15, gives $257,169 as the figure for the preceding year, and on this basis Cleveland's per capita expenditure for janitor service alone in 1913–14 was $3.34 $\left(\frac{\$257,169}{76,972}\right)$, while the per capita expenditure for "wages of janitors and other employees" averaged for that year but $3.14. In other words, it seems probable that, in the most recent year for which statistics are available, Cleveland spent relatively more for the wages of janitors alone than the average city spent for the wages of janitors plus the wages of certain other employees.

The fact that Cleveland spends more for business offices, for wages of janitors and other employees, for fuel, and for maintenance than the average city does not necessarily mean that Cleveland's expenditure for these purposes is too high. In return for the money spent the schools may be receiving unusually good service, and service of this sort may be urgently needed. The observation of the members of the Survey staff indicates that the school plant is being exceedingly well cared for and maintained, and nothing has been encountered that would seem to indicate waste or inefficiency with respect to the expenditures mentioned.

Summarizing the discussion of the adequacy of expenditure, it may be said that the outstanding fact brought out by the comparison of cities is that, disbursements per unit of population and of wealth being of but slight importance as compared with disbursements per child in average daily attendance, Cleveland's expenditure for all school purposes, measured by prevailing standards, is relatively low. Cleveland spends for permanent improvements in the school plant rather less per child in average daily attendance than does the average city. For operation and maintenance, also, Cleveland's total expenditure is smaller than that of the average city. While spending more than most cities for four important items of operation and maintenance, Cleveland spends less than the average city for five items, and the items in which the city ranks low are those which call for the largest disbursements. Relatively small expenditures for such purposes as teachers' salaries and the salaries of principals are by no means offset by relatively high expenditures for wages of janitors and for maintenance.

While Cleveland spends more for certain items than does the average city, there is no reason to believe that these expenditures are not warranted by conditions and needs. It appears, on the other hand, that expenditures for certain items are too low to insure the quality of educational service required. The situation shown to exist seems to call for an increase rather than a diminution in total expenditures.

CHAPTER III

THE ADMINISTRATION OF THE FINANCES OF THE BOARD OF EDUCATION

The sufficiency of a school system's income for the educational needs to be served is not determined solely by the amount of money received, nor is the adequacy of its expenditures fixed by the amount paid out. Boards of education differ as to efficiency —as to the returns which they obtain for a given expenditure. An income which would be sufficient if wisely administered might be wholly insufficient if funds were carelessly handled. A city which spends large sums may receive less for its money than one that spends smaller amounts. Lack of skill in the management of funds will lessen the good results of a liberal expenditure, and will aggravate the evil effects of a small income.

It has been seen that, while spending beyond its income, Cleveland spends less for the operation and maintenance of its schools than does the average city. Are the bad effects of the small expenditure intensified, and is the available income reduced, by errors of distribution and administration? If so, this need not be an argument for failing to increase

expenditure, or for reducing income; it will indicate the necessity, whatever may be done as to expenditure and income, of doing away with leakages in the school funds.

Relative Expenditures for Educational and for Business Purposes

The expenditures of the Board of Education for operation and maintenance may be divided according to the purposes for which they are made into two distinct groups. One group is made up of items having a direct bearing upon the instruction of pupils, such as expenditure for teachers' salaries, for supervision, and for stationery and other classroom supplies. In the other group are included expenditures for creating and keeping in operation the plant by means of which educational work is carried on. Expenditures for administrative offices, for wages of janitors, for the maintenance of the school plant, and for fuel, are to be included in the second group. It will be convenient to refer to the expenditures of the first group as educational expenditures and to those of the second group as business expenditures. The following list shows what items may be considered educational and what items may be considered as relating primarily to business:

Educational Purposes

Superintendent's office
Salaries and expenses of supervisors
Salaries and expenses of principals
Salaries of teachers

Stationery, supplies, and other instruction expenses

Business Purposes

Office of board and other business offices
Wages of janitors and other employees
Fuel
Maintenance—repairs, replacement of equipment, etc.

The expenditures of the first group are applied directly for the purpose for which schools are maintained—the instruction of children—while the expenditures of the second group are significant only as they contribute to educational ends. Both classes of expenditures are essential to the work of the schools.

Within the limits set by its revenue, the Board of Education determines what is to be spent for each of its activities. It distributes the available funds among the different departments of work. In exercising this function, has the Board given more, relatively speaking, to one group of expenditures mentioned above than to the other? Has the Board noticeably favored either business or educational expenditures? A comparison of the distribution of expenditures in Cleveland with the corresponding distributions for other cities should supply a basis for answering these questions.

Reference to Tables 9 and 10 shows that Cleveland stands low among the 18 cities as to expenditure per child in average daily attendance for each of the five purposes classed as primarily educational,

and high as to expenditure for each of the four purposes relating to business. Cleveland ranks fourteenth as to expenditure for the superintendent's office; eleventh as to expenditure for the salaries and expenses of supervisors; sixteenth as to expenditure for salaries and expenses of principals; twelfth as to expenditure for the salaries of teachers; and seventeenth as to expenditure for stationery, supplies, and other expenses of instruction. On the other hand, Cleveland holds sixth place among the cities relative to expenditure for the office of board and other business offices; fourth place as to expenditure for the wages of janitors and other employees; eighth place as to expenditure for fuel; and sixth place as to expenditure for maintenance. For every one of the business purposes Cleveland's expenditures are above the average for the group of cities; for every one of the educational purposes they are below the average.

It will be noted that the Board of Education, while paying teachers less per child in average daily attendance than 11 among 17 cities for which information is available, pays in wages of janitors and other employees more than 14 of the 18 cities.

The per capitas of Table 17 show expenditure for all educational purposes combined and expenditure for all business purposes combined. In Cleveland the total expenditure for education exceeds the total expenditure for business, but this is true for all the cities. It is the ranking of the cities as to expenditure of each class that is significant.

TABLE 17.—EXPENDITURE PER CHILD IN AVERAGE DAILY ATTENDANCE FOR ALL EDUCATIONAL PURPOSES AND FOR ALL BUSINESS PURPOSES IN CLEVELAND AND IN 17 OTHER CITIES OF FROM 250,000 TO 750,000 INHABITANTS. 1914 [a]

City	Expenditure per child in average daily attendance for		Rank in expenditure per child in average daily attendance for	
	Educational purposes	Business purposes	Educational purposes	Business purposes
Baltimore	$26.90	$4.21	18	15
Boston	43.37	10.44	3	3
Buffalo	38.77	9.43	10	5
Cleveland	**33.64**	**10.10**	**15**	**4**
Detroit	35.89	7.65	12	10
Indianapolis	34.05	7.95	14	9
Jersey City	34.55	5.81	13	13
Kansas City	39.69	7.62	9	11
Los Angeles	54.43	8.19	1	8
Milwaukee	32.46	3.71 [c]	16	18
Minneapolis	40.86	9.28	7	6
Newark	41.35	5.78	6	14
New Orleans	27.43 [b]	3.77	17	17
Pittsburgh	41.58	13.91	5	1
San Francisco	40.52	3.98 [c]	8	16
Seattle	48.72	8.36	2	7
St. Louis	36.80	12.81	11	2
Washington	41.77	7.15	4	12
Average	$38.49	$7.79		

[a] Based on figures presented in Table 9.

[b] Expenditure for "stationery, supplies, and other instruction expenses" not included. A higher figure for New Orleans could serve only to lower the relative position of Cleveland.

[c] Expenditure for "maintenance—repairs, replacement of equipment, etc." not included.

Among the 18 cities, Cleveland ranks fifteenth in expenditure for educational purposes and fourth in expenditure for business purposes. The table shows, moreover, that two of the three cities which spend more than Cleveland for business rank high as to expenditure for education, and that the cities which

spend less than Cleveland for education are among the cities that spend least for business. In other words, in distribution of expenditures Cleveland combines liberality toward business activities with relatively low expenditure for educational activities.

From the facts just presented it does not necessarily follow that Cleveland spends too much upon business activities. The expenditures for these activities of most of the cities in the group compared may be too low. Failure to give proper attention to the administration and maintenance of a school plant is false economy. Cleveland needs high-grade business service and apparently is getting it.

But it would seem from the figures cited that too little emphasis has been placed upon the financial support of distinctively educational work. However desirable and necessary the expenditures for business purposes may be, the work that is primarily educational should not be permitted to suffer. The situation seems to demand, not necessarily a reduction in business expenditures, but a marked advance in educational expenditures as soon as money for this purpose can be made available.

The Employment of a Director of Schools

The employment of a director of schools who has direct charge of the business affairs of the Board of Education is a distinctive feature of the administrative organization of the Cleveland school system. Previous to 1904 the Director of Schools was the responsible head of the educational system. His

powers extended to the direction of educational policies, and most officers and employees of the school system, including the Superintendent of Schools, were appointed by and were responsible to him. The administrative organization of the school district was altered, in 1904, by the terms of a state law. Under the new plan many of the powers of the Director of Schools passed to the Board of Education, but the title "Director of Schools" was retained and applied to an officer of the Board into whose hands were given the custody of all the property of the Board of Education, excepting moneys, and the administration of its business affairs. Under the present plan, the Director of Schools is equal in rank and authority with the Superintendent. What effect has the employment of such an officer on the administration of the school funds and upon the educational returns received on the investment made by the taxpaying public?

The employment of a director of schools must be considered in the light of its merits or demerits as an administrative policy, and without reference to persons. The present Director brings to the duties of his office wide experience in business affairs, knowledge of modern executive methods, and exceptional administrative ability. His management of the properties of the Board of Education has yielded excellent results. But it is by no means certain that the present Director's successors in office will be as well qualified for the position as he is.

In the preceding pages a distinction has been

made between expenditure for business activities and expenditure for educational activities. It will be noted that the expenditures for business purposes are those which, under the administrative system in use at Cleveland, concern directly the work of the Director of Schools, while the expenditures for educational purposes have an immediate bearing upon the work of the Superintendent of Schools.

The Board of Education fixes expenditures for both business and educational activities, but in exercising this responsibility members of the Board must rely very largely on the representations and recommendations of the Director of Schools and the Superintendent of Schools. The fact that Cleveland spends relatively little for instruction and relatively much for business purposes is not necessarily due to the employment of a director of schools. The Board of Education may have determined that the distribution of expenditures which has been described is the one best suited to the city's educational needs. The statistics which have been considered suggest, however, the possibility that, in employing a business officer, equal in rank and in authority with the Superintendent of Schools, the Board has placed an emphasis on business activities which may have resulted in too little attention to the financial needs of educational activities. If such a situation exists, it would seem that it might be remedied by placing the business department under the general control of the chief educational authority. In some cities the business affairs of the school sys-

tem are in charge of a business agent who is responsible to the superintendent of schools. It seems advisable to consider the adoption of such a policy for Cleveland.

The Platoon System of School Organization

Another type of economy which merits careful consideration, and which is now being tried out by the Board of Education, is the so-called "platoon plan" of school organization. This plan has for its object the more complete utilization of the school plant through the continuous occupancy of special classrooms. It is believed that through putting this plan into effect it may be possible to provide, in some existing buildings, room for three or four additional classes of 40 children each. Since schoolroom space costs approximately $10,000 per room, the increased accommodation would be equivalent to a saving of from $30,000 to $40,000 per building. The platoon system is considered at length in the section of the school survey report entitled "Overcrowded Schools and the Platoon Plan."

Systems of Accounting

The accounting system of a board of education should serve two purposes. It should serve, first, as a protection against theft, and, second, as an aid to intelligent and efficient administration. The Ohio state authorities require clerks of boards of education throughout the state to report cash receipts

and disbursements under certain specified heads. It seems that the uniform scheme of accounting prescribed by the state has been devised, primarily, with an eye to the first of the two functions mentioned, that is, the prevention of irregularities. Realizing that an adequate system of accounting may be useful in dealing with business problems, the Cleveland Board of Education has established, in addition to the accounts maintained in the office of the Clerk, a system of accounts showing the cost of the various items of operation, maintenance, and outlay. This system is in charge of the Director of Schools.

Apparently the state authorities now recognize the bearing which cost accounting may have upon administration. The Department of the Auditor of State has under consideration a uniform plan of accounting designed to show the costs of the various activities of boards of education. In important respects the forms that are being considered resemble forms already in use in the office of the Cleveland Director of Schools, but the system suggested is more complete than the existing Cleveland system. The new plan has been studied by the Director of Schools and by the Auditing Clerk of the Cleveland Board of Education, and has their approval.

Additional accounting work in the Director's office would lead to additional expense for clerical services, and the adoption of the proposed system would presumably mean more work. But the new system should lead to economies in construction,

operation, and maintenance, which would more than offset the increased expense for clerical assistance. Moreover, it should be possible to apply to the new work, without loss in efficiency, some of the money that is already being spent in another way for accounting.

The Cleveland Board of Education has in operation, at present, two distinct systems of accounting. The operation of a system showing cash receipts and disbursements, maintained in the office of the Clerk of the Board, and also of a system showing cost of operation, maintenance, and outlay, installed in the office of the Director of Schools, involves duplication of effort. As a properly organized system of cost accounts includes, or easily can be made to include, all the facts shown in a cash system, the Clerk of the Board compiles much information that is also compiled in the office of the Director of Schools. Might it not be possible to avoid duplication by maintaining only the system maintained in the office of the Director, modified, if necessary, in such a way as readily to afford information as to cash receipts and disbursements?

As has been seen, the law requires that the Clerk of the Board of Education shall report the Board's financial transactions and holds this officer responsible for the accuracy of the financial reports. But the law does not require that the Clerk shall attend, in person, to entering and totalling figures. The work of subordinates is accepted and reported by the Clerk. Might it not be entirely proper and in

accordance with the provisions of the law for the Clerk to accept and forward to the state authorities the results of work done by officers and employees of the Board of Education in the office of the Director of Schools?

The adoption of such a plan should lead to economy of effort. Such a change would make it possible either to operate the accounting system with a smaller clerical force than is now employed, or to use a part of the present force in compiling the more complete and more useful records which would form a part of the new system under consideration by the department of the Auditor of State.

Borrowings and Cash Balances

In recent years, as has been seen, the Board of Education has freely borrowed on short term notes. This borrowing has been done on the security of taxes imposed and about to be collected. The times in the school year at which the loans are effected and the periods at which they are repaid bear a definite relationship, on the one hand, to the distribution of the Board's expenditure through the year and, on the other hand, to the times at which tax money is received by the Board from the county authorities. Table 18 shows the amounts of loans effected, loans repaid, and tax money received during each month of the three school years 1911–14, together with the cash balances in the tuition and contingent funds and in the building fund at the end of each month.

TABLE 18.—CASH BALANCES IN THE TUITION, CONTINGENT, AND BUILDING FUNDS, RECEIPTS OF TAX MONEY, AND LOANS MADE AND REPAID, BY MONTHS. 1911–14 [a]

School year and month	Cash balance at end of month in tuition and contingent funds combined	Tax money received during month [b]	Loans made during month	Loans repaid during month	Cash balance at end of month in building fund
1911–12					
September	$901,945	..	..	..	$823,695
October	588,995	..	..	..	693,340
November	312,507	..	..	..	610,112
December	18,740	..	..	..	483,326
January	441,634	$700,000	..	..	507,175
February	104,383	300,000	..	..	502,192
March	468,874	868,922	..	..	781,706
April	399,303	..	..	..	715,044
May	115,380	..	$250,000	..	639,729
June	54,548	..	..	..	575,119
July	561,221	825,000	..	$250,000	678,104
August	1,031,859	717,197	..	..	602,286
1912–13					
September	847,544	..	..	..	489,771
October	532,774	..	..	..	423,063
November	355,147	..	125,000	..	578,327
December	53,376	..	..	..	1,222,530
January	335,609	700,000	..	125,000	1,179,230
February	418,352	500,000	..	..	1,116,595
March	503,240	490,026	..	..	1,076,629
April	688,156	330,166	..	..	1,024,430
May	136,605	..	..	..	963,480
June	54,295	..	225,000	..	896,943
July	204,203	425,000	..	225,000	820,220
August	1,204,174	1,239,995	..	..	767,114
1913–14					
September	978,735	..	..	..	649,204
October	655,000	..	..	..	582,236
November	315,749	..	..	..	506,449
December	68,117	5,000	105,000	..	443,500
January	56,954	450,000	..	105,000	436,060
February	53,349	400,000	..	..	400,456
March	726,985	1,515,543	..	..	703,674
April	381,989	..	..	..	647,699
May	106,880	..	82,000	..	589,555
June	79,264	70,000	222,000	..	475,746
July	591,369	912,000	..	304,000	326,231
August	1,095,834	1,103,052	..	..	548,073

[a] Data supplied by the Clerk of the Board of Education.

[b] Includes interest paid by county on balances in county treasury. For this reason the figures are slightly higher than corresponding figures presented in the annual reports of the Board of Education.

The tax money by which the Board of Education is supported is payable to the county authorities semi-annually, on June 20 and on December 20, but there is always some delay in making collections. The money collected is paid to the Board in installments. Payments on taxes due in December begin in January and continue through March and sometimes into April, while payments on taxes due in June usually begin in July and extend to the end of August. In September, October, November, and May, and usually in December, April, and June, no tax money is received.

The expenses of the Board of Education, on the other hand, are distributed rather evenly through the months of the school year in which the schools are in session. In the tuition fund, especially, money accumulates during the summer, but in recent years the Board has not had enough money on hand at the opening of the school year in September to support its activities until tax money has been received in January, February, and March. Money to bridge the gap has, therefore, been borrowed in November or December and has been repaid upon the receipt of tax funds in January. Moreover, the tax money received in January, February, and March does not suffice to carry the Board to the end of June, and it has been necessary again to borrow in May or June against the tax money payable to the county authorities in June. The fact that a portion of the money received each half year from the county treasurer must be ex-

pended for the payment of notes already issued contributes, of course, to the necessity of again borrowing before the expiration of another half-year period. Table 18 shows that borrowing has always occurred in months in which either no tax money, or but a small amount, was received from the county authorities, and when the combined cash balances in the tuition and contingent funds were low.

It has been suggested that the necessity for borrowing might be removed by changing the periods in the year at which tax money is paid to the Board of Education. Such a change could be brought about in only two ways—by changing the dates on which tax payments to the county authorities are due, or by regulating the practice of the County Treasurer in turning over to the Board the money collected from taxpayers.

As taxes for the Board of Education, for the city, and for the county, are all collected at the same time, and as the dates of payment are the same for the whole state of Ohio, a change by the first method mentioned could be accomplished only through the alteration of the state law, and interests not identical and possibly at variance with those of the local Board of Education would have to be considered. Moreover, it does not seem that such a change would contribute to the relief of the Cleveland situation. As has been stated, the Board's expenditures are distributed evenly through the school year, and by the present arrangement the cash balance on hand

is larger at the beginning of the year than in any subsequent month. A change in the date on which tax money is payable would merely shift, backwards or forwards, the periods at which it is necessary to borrow. The true source of the Board's need for borrowing consists in an excess of expenditure over income, and this difficulty can not be remedied by any manipulation of tax days.

An undue delay on the part of the county authorities in turning over to the Board of Education the tax money collected, while it would not affect the fundamental relationship between income and outgo, might be a source of irritation, annoyance, and, if the money were held without interest, even of actual loss. But it does not appear that there is any occasion to complain as to the way in which payments are made. Not only are the funds turned over in installments, but the county authorities seem willing to adjust the dates of installments in order to meet, as far as possible, the needs of the Board. Moreover, as the county pays to the Board of Education interest on the balances in the county treasury, the county officers have no incentive to delay payments, nor does the Board lose interest money through any brief delays that may occur.

The requirement of the state law that the finances of the Board of Education be handled in four funds has already been mentioned. As its name indicates, the building fund is the fund from which permanent improvements are made. The balances in this fund at the end of each month are shown by the figures of

the right-hand column of Table 18. A balance at the end of a month does not show the amount on hand throughout the month, as money is received and paid out at irregular intervals throughout the year. But as the amounts which are received by and expended from the building fund in the course of the entire year are known, and as these amounts do not greatly exceed some of the monthly cash balances, these cash balances may be accepted safely as an approximate index of money on hand.

It will be remembered that deficits which have given rise to the necessity for borrowing have occurred in the tuition and contingent funds. An inspection of the table shows that, in the periods in which the cash balances in these funds have been so low that it has been necessary to borrow, there has always been a large cash balance in the building fund. On every occasion on which money was borrowed in the years 1911–14 the balance in the building fund greatly exceeded the amount borrowed. The Board of Education paid for money borrowed in that period interest at rates ranging from 5.0 to 6.0 per cent,* while the average rate of interest earned by balances in the building fund did not exceed 3.1 per cent.

* In the year 1915 the Board of Education has been able to borrow at rates much lower than those cited in the text. That these low rates have been obtained is believed to have been due in part to the care exercised by the Board in securing loans from the banks offering the most favorable terms, but very largely to the exceptional financial conditions prevailing. It would be most unwise for the Board to count upon being able to secure money under ordinary conditions

The presence of a cash balance in the building fund means that money to be expended for improvements and additions to the school plant, obtained either through taxation or from the sale of bonds, has been paid into the treasury of the Board of Education in advance of the time when payments for land purchased or for buildings are due. It is necessary that the activities of a public body, such as a board of education, should be carefully regulated with a view to protecting the interests, not only of the public, but of persons and corporations entering into contractual relations with that body. For the purpose of affording such protection, it is provided by law that boards of education, in making contracts, shall appropriate, from money not otherwise appropriated, actually in the treasury or in process of collection, amounts sufficient to satisfy each contract entered into. To illustrate: if a contract is made which calls for the payment of $50,000 at the end of six months, then this amount must be held in reserve during the entire six months period. The existence of such a regulation leads inevitably to the maintenance of a large cash balance in the building fund.

But does the balance in the fund ever materially exceed the amounts required to safeguard contracts?

at rates so low. Moreover, any factors which would permanently lower interest rates on notes would probably tend to reduce also interest rates paid by banks on deposits. It seems most probable that in the long run interest rates on notes issued by the Board of Education will continue to be materially higher than interest rates paid by banks on the Board's deposits.

The basis for an answer to this question is supplied by the figures of Table 19, which show the amounts of cash in the building fund against which no appropriations had been made.

TABLE 19.—CASH BALANCES IN BUILDING FUND AGAINST WHICH NO APPROPRIATIONS HAD BEEN MADE, BY MONTHS. JULY, 1913–MAY, 1915 [a]

School year and month	Cash in building fund unappropriated at end of month
1912–13	
July	$372,666
August	.. [b]
1913–14	
September	192,680
October	184,400
November	52,013
December	.. [c]
January	322,487
February	311,962
March	166,920
April	130,891
May	23,755
June	.. [c]
July	261,294
August	43,750
1914–15	
September	24,568
October	334,384
November	264,885
December	269,891
January	1,035,874
February	922,217
March	802,112
April	942,124
May	886,835

[a] Data supplied by the Director of Schools.
[b] Information not available.
[c] Appropriations exceeded the cash balance in the building fund by $99,881 on December 31, 1913, and by $31,926 on June 30, 1914. These excess appropriations were made against taxes levied and in process of collection.

It appears that in 20 months out of the 22 for which data are available substantial sums of money were on hand which were not required for safe-

guarding contracts. Moreover, it must be borne in mind that in computing the figures of the table only cash has been considered. If the amounts appropriated against contracts had been deducted from the cash balances, plus amounts in process of collection (against which appropriations may lawfully be made), the money on hand would have been seen materially to have exceeded, in each month of the 22, the reserve required by law.

It would seem that the interest of the schools would be served by transferring temporarily to the tuition and contingent funds cash in the building fund, thus avoiding altogether or in part the necessity of borrowing from outside parties. As the law stands, such a transfer would be, under ordinary conditions, illegal; but may it not be advisable to seek to secure the modification of the existing law? The amounts borrowed from banks have always been well below the amounts of taxes already levied. If bankers are willing to make loans upon the security of this tax money, there seem to be no reasonable grounds for objection to the transfer of money already belonging to the Board of Education. The adoption of the policy suggested should result in saving the Board each year substantial sums of interest money.

Cash Balances and the Sale of Bonds

The large cash balances in the building fund should be considered, further, in connection with the sale of bonds. The size of the cash balances is due in

part to the fact that money received from the sale of bonds is not spent immediately. Table 20 shows the amounts of bond issues in the past seven years.

TABLE 20.—AMOUNTS OF BOND ISSUES IN RECENT YEARS, TYPES OF ISSUES, AND RATES OF INTEREST [a]

Year	Bonds issued		
	Amount	Type	Rate of interest
1909	$200,000	20 year	4.0 per cent
1910	500,000	20 year	4.5 per cent
1911	500,000	20 year	4.5 per cent
1912	1,400,000	20 year	4.0 per cent
1913	..	..	..
1914	500,000	20 year	4.5 per cent
1915	400,000	Serial	4.5 per cent
	600,000	20 year	4.5 per cent

[a] Data supplied by the Clerk of the Board of Education.

When building operations which are to be paid for by bond issues are determined upon, the first step taken by the Board is to authorize a bond issue and place the bonds on the market. Apparently it is not, in many instances, until the bonds have been sold and the money is in the treasury that steps are taken for the purchase of land and contracts are made with builders. As has been seen, the law requires that appropriations be made to cover contracts, and that the funds appropriated be held in reserve. But it should be borne in mind that when new buildings are constructed all the expenditure does not occur at the same time, and that all contracts need not be made at the same time. The purchase of land upon which the buildings are to be

erected may be in itself a lengthy process, as it is often necessary to institute condemnation proceedings in the courts. Until the land has been purchased there may be no occasion for letting building contracts. In view of these facts, might it not be possible for the Board to arrange to market its bonds in such a way that until land had been purchased only that part of a bond issue required to raise money for this purpose should be disposed of, the balance of the issue being sold as building contracts were made? The Board should be able to arrange to market bond issues in installments.

The adoption of such a plan should result in the saving of a considerable amount of interest money. Cash balances in the building and other funds are deposited in the banks which have qualified for the purpose. These banks pay interest on the balances in their hands, but the average rate for the three-year period beginning July 1, 1913, is about 3.1 per cent, while the rate of interest on bonds recently issued by the Board of Education has been 4.0 and 4.5 per cent. It is evident that the Board is losing on that part of the money in the building fund which is obtained by the sale of bonds the difference between 3.1 per cent and 4.0 or 4.5 per cent interest. On this basis, the annual loss on the average amount in the building fund for the past three years would be, in round numbers, between $6,000 and $9,500.

Of course, all the money in the building fund is not produced by the sale of bonds—a part comes from taxes—nor would it be possible or advisable wholly

to do away with the cash balance. Moreover, the marketing of bonds in very small installments is sometimes expensive. But any prudent and practicable reduction in the money on hand and not appropriated that might be made by the method suggested would result in a saving.

Interest on Bank Deposits

The cash in the several funds of the Board of Education is deposited in banks in interest-bearing accounts. Does the Board manage its bank deposits in such a way that the money earns the largest possible interest returns? The banks in which money is deposited are selected every three years through competitive bidding. Those banks are selected as depositaries which, having fulfilled the other requirements, offer the highest interest rates.

As has been stated, the average interest rate contracted for for the three-year period, 1913–16, is about 3.1 per cent.* Some of the banks pay rates of interest that are higher than the average and some rates that are lower, the maximum rate for the period being 3.60 per cent and the minimum rate 2.77 per cent.

* With deposits distributed among the banks which serve as depositaries in proportion to the amounts which they are qualified to receive, the interest earned in a year would amount to 3.099 per cent of the principal, and this figure represents the true average rate of interest. It is interesting to note that the simple average, obtained by adding together all the interest rates paid by the different banks and dividing the total by the number of banks, is 3.083 per cent, a figure very closely approximating the true average.

The money received by the Board of Education is deposited in the banks designated by the Clerk of the Board. In distributing this money among the different banks which have qualified as depositaries, it is the Clerk's practice to endeavor to keep deposits proportional to the amounts which the different banks have qualified to receive. Thus, if one bank has qualified to hold a maximum of $200,000, while another has qualified for a maximum of $100,000, the Clerk seeks to keep in the first bank a cash balance of the Board of Education's funds twice as large as that kept in the second. By this method differences in the rates of interest paid are ignored. The banks which pay the lowest rates of interest receive precisely the same treatment as those which pay the highest rates.

It is believed that the Clerk should adopt a different plan of procedure, keeping at a maximum the deposits with the banks paying the highest interest rates, and making deposits in the banks offering lower rates only when those which pay the higher rates have received all they have qualified to take.

Such a change in policy might have the effect of inducing banks, in the future, to offer higher rates of interest for Board of Education funds, as bank officers might feel that it was distinctly to the advantage of their institutions to have the use of school money. It is possible that the banks do not consider that much is to be gained by holding the deposits of the Board of Education funds, even at the relatively low rates of interest paid, and that bidding would

not be affected. But the change in policy would, in any event, add to the Board's income from interest.

TABLE 21.—AUTHORIZED DEPOSITARIES, MAXIMUM DEPOSITS, AND RATES OF INTEREST, FOR THE THREE-YEAR PERIOD, JULY 1, 1913–JULY 1, 1916 *

Bank	Maximum authorized deposit	Rate of interest paid
People's Savings Bank	$100,000	3.60
Garfield Savings Bank	100,000	3.26
Lake Shore Banking and Trust Co.	200,000	3.25
Clark Avenue Savings Bank	50,000	3.25
State Banking and Trust Co.	250,000	3.15
Lincoln Savings and Banking Co.	50,000	3.15
Pearl Street Savings and Trust Co.	200,000	3.125
First National Bank	300,000	3.1025
Superior Savings and Trust Co.	300,000	3.05
Hough Bank and Trust Co.	25,000	3.03
Nottingham Savings and Banking Co.	15,000	3.00
Hough Bank and Trust Co.	25,000	2.88
Central National Bank	300,000	2.85
Citizens Savings and Trust Co.	42,500	2.77
Cleveland Trust Co.	42,500	2.77

* Data supplied by the Clerk of the Board of Education.

Table 21 shows the various banks receiving deposits in the period 1913–16, the amounts they were authorized to receive, and the rates of interest paid. A computation shows that, distributed by the plan now followed, in proportion to the amounts which the banks are empowered to take, the average amount of cash in all the funds in the school year 1913–14, approximately $1,024,000, would earn interest to the amount of $31,731 in the year, while the same amount, distributed in such a way as to keep maximum deposits in the banks paying the highest interest rates, would yield $32,981 per year.

It would seem that the Board of Education is neglecting a favorable opportunity to add about $1,250 to its annual income. While this amount does not represent a large gain, it could be had, apparently, without sacrifice or effort.

Paying for Improvements by the Proceeds of Bond Issues

For a number of years past the Board of Education sought to make most improvements and additions to the school plant from its current income. New high school buildings were constructed, in most instances, from the proceeds of bond issues, but the elementary schools built each year were paid for from funds received through taxation. Table 22 shows the proportion of the income of the building fund which has been derived from bond sales in the past 10 years.

While the proportion of the income of the building fund derived from sales of bonds is higher in several recent years than in the earlier years of the period, the fact must not be overlooked that in 1910–11 and 1913–14 nothing was received from this source. The Board has now been compelled, however, to abandon its earlier policy, and within the past year or two most of the money needed for improvements has been raised by sales of bonds. This change in practice has been made, apparently, because no other course was open. It would have been impossible to have made all necessary improvements from current income.

TABLE 22.—PROPORTION OF INCOME OF BUILDING FUND DERIVED FROM SALES OF BONDS. 1904–1914 [a]

School year	Income of building fund from all sources	Income of building fund from sales of bonds	
		Amount [b]	Per cent of income from all sources
1904–5	$376,819	$100,000	26.5
1905–6	691,247	358,152	51.8
1906–7	346,321	..	..
1907–8	627,044	263,893	42.1
1908–9	674,547	202,044	30.0
1909–10	1,129,071	528,419	46.8
1910–11	610,811	..	..
1911–12	1,357,005	995,815	73.4
1912–13	1,009,973	949,000	94.0
1913–14	787,286	..	..

[a] Annual reports of the Board of Education.

[b] The figures presented in this column do not correspond to the amounts of bond issues as shown in Table 20. The want of correspondence is due to the fact that one table gives data for school years, the other for calendar years, and, further, to the fact that the Board receives for each bond issue, not the exact face value of the issue, but an amount fixed by competitive bidding.

The course formerly pursued represents a thoroughly sound financial policy—one which the educational authorities of many cities would do well to adopt. Cleveland is now receiving the benefit of wise administration in earlier years. As improvements have, in the main, been paid for from current revenues, the proportion of total expenditure devoted to the payment of interest on or to the reduction of indebtedness is much lower than in many cities. But the financial situation at Cleveland is not a normal situation. The application of a policy which under ordinary conditions would be prudent and wise would result at the present time in seri-

ously limiting the activities of the school system. The current income of the Board of Education has been so restricted in recent years that, as has been seen, it has been necessary to borrow in order to meet current expenses and there has been a rapidly mounting deficit in the Board's funds. From this situation relief must in some way be obtained in order that the educational work of the Board may not meet with a setback. Under the most favorable conditions, the situation may not be improved for several years. Until relief is secured, it seems both necessary and advisable to continue the recently adopted policy, expending practically the entire current revenues of the Board upon the expenses of operation and maintenance, and making all improvements from the proceeds of bond sales. Such a procedure will place a burden on a coming generation, which will have to retire the bond issues, but it seems that this evil is less serious than the evil that would result from the limiting of educational work which would occur if a part of current income were used, under present conditions, for improvements.

Paying for permanent improvements from sales of bonds should be regarded, however, as a temporary policy, to be abandoned as soon as an increased income makes it possible to return to the earlier and more far-sighted practice.

The Credit of the Board of Education

Much of the activity of the Board of Education in recent years has been made possible through bor-

rowing, either by the sale of bonds for improvement or by short term notes for current expenses. It has been suggested above that, until some remedy be found for the shortage of current income, the practice of issuing bonds be continued. How far can the Board continue the process of borrowing, on bonds and on notes, without impairing its credit —without finding it impossible to borrow except at exorbitant rates of interest?

Apparently the only limit to borrowing on short term notes is the amount of the tax levy. All the loans made are against taxes levied and in process of collection. It is understood that, up to the limit of the amount levied, the security is, from a legal standpoint, absolutely good. Hence there is no reason why the Board of Education should not be able to continue borrowing in this way at the rates of interest current at the times loans are effected. These rates vary, but, under ordinary conditions, are not very high.

It seems that the possibility of borrowing through the sale of bonds, and the interest rates required upon bond issues, must sooner or later be affected by the operation of the state laws limiting taxation. These laws will be discussed further on. The law does not limit the amount of bond issues. A board of education may issue bonds in any amount authorized by the voters of the school district. But, as will be seen, the law limits the current income of the boards, and the Cleveland Board is already spending all the income which it can obtain under the law.

When bonds are issued the state law requires that a sinking fund be created to provide for their redemption, and interest on the bonds must be paid each year. As both sinking fund charges and interest must be provided for from the current income, it is evident that the law limiting the income of the Board limits its ability to make the payments made necessary by the issuance of bonds. Up to the present time purchasers of securities have not felt, apparently, that the value of the Board of Education bonds has been impaired through the existence of the conditions described, and bonds have been purchased at the rate prevailing for such securities. In the judgment of bankers, however, buyers of bonds will sooner or later feel that their security is injured by the laws limiting the income of the Board and will either demand higher interest rates or refuse to purchase future issues.

Types of Bond Issues

In considering the raising of money by the sale of bonds, it must be borne in mind that the money borrowed must sooner or later be repaid, and that interest must be paid on all indebtedness outstanding. There is no way to avoid the repayment of principal or the payment of interest, but the two types of bond issues in common use provide different methods of meeting these charges.

Under the plan of borrowing most frequently adopted by American cities, all the bonds of an issue are made payable at the close of a fixed term of

years. Interest on all the bonds is paid each year. In some instances no steps are taken for the repayment of bonds until the term is at an end, and the bonds are then paid in full either from current income or by the creation of a new bond issue. Another way of providing for the repayment of bonds issued for a term of years is to create a sinking fund, into which money is paid annually during the lifetime of the issue. Money in the sinking fund is invested in such a way as to earn interest, and payments to the fund are so adjusted that, with the interest added, the fund contains, by the time the bonds are due, the full value of the issue. The Ohio state laws require that sinking funds be created and maintained for the redemption of bonds issued by boards of education.

A second method of borrowing is to create serial bond issues. By this method, which is apparently gaining in favor, a portion of the bonds are retired each year. Thus, if the total amount of a bond issue is $100,000, the issue may be written in such a way that $5,000 worth of bonds are retired at the end of one year, $5,000 at the end of two years, and so on, until the last installment is retired at the end of the twentieth year. Where this plan is followed the amount of interest to be paid decreases from year to year. It is clear that during the second year the amount of indebtedness outstanding is $95,000; that during the third year the amount outstanding is $90,000; and that at the end of the nineteenth year it is $5,000.

Or the serial bonds may be so adjusted that the payment for retirement of bonds plus the payment of interest will be the same each year for a series of years. Returning to the illustration employed above: as the payment of interest is largest in the earliest years, the repayment of principal through the retirement of bonds might be reduced for these years in such a way that the annual payments of principal and interest combined would remain constant.

As one does not get something for nothing in the financial world, the cost of borrowing is, in the long run, the same by the two methods of bonding just described. No saving is to be effected by employing either plan to the exclusion of the other. The use of serial issues has, however, the definite advantage that, as no sinking fund is necessary, the labor of managing such a fund and the danger of losses through investments are avoided.

CHAPTER IV

THE INCOME OF THE BOARD OF EDUCATION

The expenditures of the Cleveland school system are greater than its revenue receipts. In recent years the outlay for permanent improvements, as compared with outlay in cities of similar size, has been rather low. Improvements are now being paid for, moreover, not from current revenue, but from the proceeds of bond sales. It has been shown by the comparative tables that, for operation and maintenance, Cleveland is spending less per child in average daily attendance than the average city. Clearly there can be no question as to the inadvisability of reducing total expenditures.

It appears, further, that the business affairs of the Board are administered efficiently and with economy. Small amounts might be saved by eliminating duplication in the keeping of accounts, by utilizing superfluous cash balances, or by obtaining higher interest rates on money deposited in banks. A substantial gain in efficiency might also be made by the adoption of the platoon system of school administration. The most favorable results

that could arise through changes in administrative methods would not, however, materially relieve the general financial situation.

If the revenue of the Board of Education, per child in average daily attendance, is to remain at its present level, either the schools must do less for the children of the city than they are now doing, or a deficit must persist and continue to grow. The obvious cure for the deficit, the only remedy which should be considered seriously by the citizens of Cleveland, consists in increasing the revenue.

How much of an increase in the revenues of the Board of Education is necessary and desirable? The only possible answer is that the Board's income should be sufficient to meet the real needs of the schools. Stated in general terms, these needs consist in (1) adequate expenditure for operation and maintenance, (2) adequate expenditure for permanent improvements, (3) provision for paying for the greater part of necessary improvements from current revenues rather than from the proceeds of bond sales.

Sources of Revenue

The annual revenue receipts of the Cleveland Board of Education during a period of 12 years have been shown in Table 2. It will be convenient at this point to give the revenue of the years 1912–13 and 1913–14, distributed according to sources. The figures appear in Table 23.

TABLE 23.—SOURCES OF REVENUE RECEIPTS OF THE CLEVELAND BOARD OF EDUCATION FOR THE YEARS 1912–13 AND 1913–14 [a]

Sources of revenue	Receipts in	
	1912–13	1913–14
Western Reserve Fund	$7,070	$7,115
State Fund	276,052	285,218
Local Taxes	3,396,154	4,155,172
Earnings [b]	82,440	66,916
Total	$3,761,716	$4,514,421

[a] Annual reports of the Clerk of the Board of Education.
[b] Earnings of sinking fund not included.

Mentioned in the order of their importance, the sources of the revenue of the Board of Education are: local taxes, state taxes, earnings, and income from the Western Reserve Fund. "Earnings" consist of interest money and fees. From every source except earnings the Board's income was larger in 1913–14 than in the preceding year. Of the total income for 1913–14, two-tenths of one per cent was derived from the Western Reserve Fund, 1.5 per cent from earnings, 6.3 per cent from the state tax, and the remaining 92.0 per cent from local taxes.

Is it possible to increase the revenues of the Board of Education, and, if so, from what source or sources are the needed increases to be obtained? The sources of income just described are the only ones available. There is no reason to look for any marked advance in receipts from the Western Reserve Fund or in earnings, and as the present receipts from these sources constitute but a small

fraction of the total revenue, a relatively large increase in either item would have little effect on the general situation. Further discussion may, therefore, be confined to receipts from state and local taxes.

State Taxes

The money raised by the state tax for school purposes is apportioned among the communities of the state on the basis of school census returns. It was discovered, early in the present school survey, that the Cleveland schools have not, in recent years, received from this source all the money to which they are lawfully entitled. This has occurred through the failure of census enumerators to secure the names of all children of school age—a failure due, at least in part, to inadequate supervision. It is probable that, in the school year 1913–14, the amount sacrificed through the incompleteness of the census returns did not fall short of $18,000.

The imperfections of the school census were brought to the notice of the authorities, who, in taking the school census completed in June, 1915, made a special effort to obtain as nearly as possible a complete enumeration. It is believed that this endeavor was successful; that the returns of the 1914–15 school census were much less inaccurate than returns for the preceding years; and that in the future the Board will employ such measures as may be necessary in order to obtain the maximum possible revenue from this source.

But a gain of several thousand dollars in the annual

receipts from state taxation will not solve the financial problem of the school system. The deficit in the school funds is increasing at a rate of many thousands per year. In seeking permanent relief it is, therefore, necessary to turn to a consideration of the prospects of increased revenue from local taxation.

Local Taxes

Local taxes are by far the most important source of income. In 1912–13 the Board's revenue from this source was nearly $3,400,000; the figure for 1913–14, including the yield of a special one-mill levy authorized by the vote of the electors, was over $4,150,000. The needs of the schools called for a considerable increase over these amounts. Can such increase be obtained and, if so, by what means?

In some cities the decision as to increasing taxation for school purposes rests wholly with the voters of the community. To secure additional income for the schools of these cities, it is necessary only to convince the voters that an increase is desirable. The power of the citizens of Cleveland with respect to school expenditures is limited. A state law limits the tax that may be levied to a fixed and rather small proportion of the assessed value of taxable property. In the past few years, moreover, property values have not been determined, as in many places, by locally elected or appointed assessors, but by officers of the state government. While a new law, soon to become effective, provides for locally elected assess-

ors, this law is apparently drawn in such a way as to leave room for inequalities in assessments.

Limitation of Tax Rates

A state law enacted in 1911 provides that in any school district of Ohio the tax levied for the support of the schools shall not exceed, in the first instance, five mills on the dollar of the total assessed valuation of all taxable property. The limit fixed by the law may be exceeded, however, by levies for sinking fund and interest purposes on account of indebtedness existing at the time the law went into effect, or on account of indebtedness afterwards incurred by a vote of the electors; or by levies authorized by a special vote of the electors to provide for expenses and improvements in excess of the amounts which can be raised by a levy of five mills on the dollar.

In other words, without special authorization of any kind, a board of education may lawfully levy taxes for current expenses and improvements at a rate not exceeding five mills on the dollar, and may impose an additional levy for sinking fund and interest purposes on account of indebtedness existing at the time the present tax law went into effect. A board of education may also impose taxes at a rate in excess of five mills on the dollar (1) for interest and sinking fund purposes on account of indebtedness authorized, after the existing law went into effect, by special vote of the people, or (2), by the authority

of a special vote, to obtain additional funds for expenses and improvements.

Restrictions as to tax rates are not imposed solely upon boards of education. With exceptions similar to those affecting taxation for school purposes, it is provided that taxation for county purposes shall not exceed three mills on the dollar; that taxation by municipal corporations for corporation purposes shall not exceed five mills on the dollar; and that taxation by townships for township purposes shall not exceed two mills on the dollar.

The power to tax is further limited by provisions affecting the combined expenditures of all governmental bodies. The law provides that, in any taxation district of the state, the tax levied for the collection of funds to cover the expenses of all governmental bodies—state, county, school district, and municipality—shall not exceed, in the first instance, 1 per cent of the total assessed valuation of all taxable property. The limit fixed by law may be exceeded, however, by levies for sinking fund and interest purposes on account of indebtedness existing at the time the law took effect, or on account of indebtedness afterwards incurred by a vote of the people; by special levies provided for by vote of the electors; by special assessments; and by levies for road taxes, and similar special purposes. But, notwithstanding these exceptions, the tax rate for all the purposes of government is not, for other than certain special emergency purposes specified by law, to exceed 15 mills on the dollar—

1.5 per cent of the assessed valuation of the taxable property within the taxation district. This means that 1.5 per cent of the assessed valuation is the maximum tax rate for all the ordinary purposes of government.

The legislature which passed this law provided, further, that the amount collected in taxes within a given district for all the purposes of government should not exceed in 1911 the amount collected in 1910; that the amount collected in 1912 should not exceed the amount collected in 1910 plus 6 per cent; that the amount collected in 1913 should not exceed the amount collected in 1910 plus 9 per cent; and that the amount collected in 1914, or in any subsequent year, should not exceed the amount collected in 1910 plus 12 per cent. Population, wealth, and public needs of cities might and doubtless would continue to increase indefinitely, but revenue from taxation was to be held down forever to 112 per cent of the revenue received in 1910. This provision of the law, commonly known as the "1910 limitation," was repealed in 1913. It is mentioned here in the belief that it may serve to indicate the point of view from which the framers of the provisions of the law now remaining in force considered the general problem of taxation.

Budget Commissioners

To make the adjustment necessary where the amounts levied by the different governmental bodies within a taxation district called for a tax

rate in excess of 10 mills on the dollar for ordinary expenses, except as provided for by special vote of the electors, or for a rate in excess of 15 mills on the dollar for all the ordinary purposes of government, boards of budget commissioners were created. There are budget commissioners for each county of the state. Under the provisions of the state law, each governmental body within the county prepares each year an itemized budget covering the anticipated income and expenditures of the year about to open. These budgets are submitted to the county auditor. If none of the budgets submitted calls for a tax exceeding the legal limit set for the body presenting it, and if the total expenditures called for by all the budgets, considered together, do not require a rate in excess of the legal limit of 15 mills on the dollar, the budget commissioners approve the budgets, taxation is fixed at the rate required, and collections are made by the county treasurer. If any one budget calls for a tax rate in excess of the limit fixed by law for the body submitting it, the budget commissioners make the necessary reduction in the budget. But if, the individual budgets being within the limits set for the bodies presenting them, the combined expenditures specified call for a rate in excess of the limit of 15 mills on the dollar set for all expenditures, an adjustment is made by the budget commissioners. The budget commissioners may make such reductions in any budget or budgets as may be necessary to bring the tax rate down to the maximum fixed by law, but are forbidden to in-

crease any budget or any item of any budget. The budget commissioners are at present the county auditor, the county prosecutor, and the county treasurer.

Valuation of Property

The most recent assessment of property values in the city of Cleveland was made in 1911 by a board of assessors. At that time the law provided for assessments every four years. In 1913 the law was changed and the work of assessing property values was placed in the hands of deputies of a State Tax Commission. These deputies were appointed by the state administration and were not responsible to local officers or electors. A continuous assessment of property values was, apparently, contemplated by the law placing the work in the hands of these deputies.

In 1914 the deputies of the State Tax Commission undertook a re-assessment of property. They expected to complete this re-assessment by July, 1915, in order that taxes due during the following year might be levied on the new basis. Early in 1915 these deputies were removed from office and new deputies were appointed. The new deputies were unable to make a re-assessment of all property between the time of their appointment and July 1, 1915; apparently they were unwilling to accept the work already done by their predecessors in office.

By a law enacted at the 1915 session of the state

legislature, another change has been made in the method of assessing property values. Beginning January 1, 1916, the property is to be appraised by locally elected officers. Each ward of the city of Cleveland is to elect one assessor who is to determine the value of property in the ward electing him. The county auditor is given authority to supervise and direct the work of assessment.

Effects of Limitations on Taxation

Those provisions of the law which limit tax rates have had the effect of limiting the revenue of the Board of Education. It has been the restriction on the rate for all governmental purposes, however, rather than that on the rate for school purposes, with which the school authorities have been directly concerned. It is possible that, even had the Board of Education been free to levy taxes for school purposes at the maximum rate permitted for these purposes, the revenue obtained would have been insufficient. But never since the law went into effect has the Board been free to tax at this maximum rate. Each year the combined budgets presented by the different governmental bodies of the county in which Cleveland is situated have called for a rate in excess of 15 mills on the dollar, and the Budget Commissioners have been compelled to make reductions. Table 24 shows the extent to which the budgets have been cut.

TABLE 24.—REDUCTIONS MADE BY BOARD OF BUDGET COMMISSIONERS IN TAX LEVIES, INCLUDING SPECIAL ASSESSMENTS, ASKED FOR BY BOARD OF EDUCATION, CITY, AND COUNTY. 1911–15 [a]

Governmental body and year	Levy asked for	Levy allowed by Budget Commission	Reduction in levy by Budget Commission	
			Amount	Per cent of amount asked for
Cleveland Board of Education				
1911–12	$3,049,838	$2,893,000	$156,838	5.1
1912–13	3,227,362	3,105,000	122,362	3.8
1913–14	3,983,950	3,900,000	83,950	2.1
1914–15	4,855,500	4,300,000	555,500	11.4
Average	$3,779,163	$3,549,500	$229,663	6.1
City of Cleveland				
1911–12	$2,801,117	$2,724,000	$77,117	2.8
1912–13	3,416,784	2,898,000	518,784	15.2
1913–14	3,900,999	3,175,000	725,999	18.6
1914–15	5,200,000	3,646,000	1,554,000	29.9
Average	$3,829,725	$3,110,750	$718,975	18.8
Cuyahoga County				
1911–12	$1,249,000	$1,085,000	$164,000	13.1
1912–13	1,587,358	1,150,000	437,358	27.6
1913–14	1,533,900	1,264,000	269,900	17.6
1914–15	1,809,900	1,809,900	..	..
Average	$1,545,040	$1,327,225	$217,815	14.1

[a] Data supplied by office of County Auditor of Cuyahoga County.

The reductions in the budgets submitted by the Board of Education have ranged in a four-year period from slightly less than $84,000 to more than $555,000, the average reduction for the period being about $230,000. Stated as percentages of the amounts

asked for, the smallest reduction has been one of 2.1 per cent; the largest one of 11.4 per cent.

Under certain conditions, and within definite limits, the amount of the revenue of the Board of Education depends on the discretion of the Budget Commissioners. If the demands of the several governmental units within the district call for a total tax rate in excess of the legal maximum, the budgets are reduced, not *pro rata*, but in such a way as the Commissioners may consider proper. The Budget Commissioners may favor the Board of Education by cutting down its budget less than those presented by other governmental bodies, or may discriminate against the Board by cutting down the school budget more than the others. Has the action of the Budget Commissioners been, on the whole, favorable or unfavorable to the Board of Education? In seeking an answer to this question, the first step is to compare reductions made in the amounts asked for by the Board with reductions made in the amounts asked for by the city and the county. The facts have been given in Table 24.

It appears from the table that, on the whole, the Board of Education has fared much better than has either the city or the county. While, as has been stated, the reduction in the school budget has ranged from 2.1 per cent to 11.4 per cent, the reduction in the city budget has ranged from 2.8 per cent to 29.9 per cent, and the reduction in the county budget from nothing to 27.6 per cent. For the four years the average budget reduction has been 18.8

per cent for the city and 14.1 per cent for the county, as compared with only 6.1 per cent for the Board of Education. It cannot be said, on this evidence, that the Commissioners have discriminated against the public schools.

TABLE 25.—PROPORTION OF TOTAL GOVERNMENTAL COST PAYMENTS DEVOTED TO SCHOOL PURPOSES IN CLEVELAND AND IN 18 OTHER CITIES OF FROM 250,000 TO 750,000 INHABITANTS. 1913 [a]

City	Governmental cost payments for			Rank in per cent of governmental cost payments devoted to school purposes
	All purposes	School purposes [b]		
		Amount	As a per cent of payments for all purposes	
Baltimore	$18,090,899	$2,544,186	14.1	18
Boston	32,553,175	5,877,619	18.1	14
Buffalo	15,522,286	2,774,296	17.9	15
Cincinnati	14,929,267	2,720,466	18.2	13
Cleveland	**18,554,874**	**3,987,673**	**21.5**	**6**
Detroit	16,542,571	3,250,905	19.7	10
Indianapolis	5,425,024	1,528,871	28.2	3
Jersey City	6,423,276	2,012,220	31.3	1
Kansas City	11,363,638	2,388,674	21.0	8
Los Angeles	26,202,673	4,853,343	18.5	12
Milwaukee	10,373,414	2,284,101	22.0	5
Minneapolis	11,172,169	3,290,317	29.5	2
Newark	13,955,856	3,395,909	24.3	4
New Orleans	8,878,170	1,526,592	17.2	16
Pittsburgh	22,836,171	4,407,776	19.3	11
San Francisco	27,557,301	2,535,578	9.2	19
Seattle	13,234,476	2,115,020	16.0	17
St. Louis	21,516,430	4,283,987	19.9	9
Washington	12,339,165	2,646,546	21.4	7
Average			20.4	

[a] U. S. Bureau of the Census, Financial Statistics of Cities, 1913, pp. 41–2.

[b] Includes expenses and outlays.

But the comparison of budget reductions does not, of itself, show the attitude of the Budget Commissioners toward the Board of Education. A failure on the part of the Commissioners to reduce the school budget in as great a degree as the other budgets may mean merely that the Board of Education has been relatively modest in its demands; that because it has asked for little it has received a large proportion of what it has asked for. The relative reductions in budgets must be viewed in connection with facts concerning the distribution of total governmental expenditure. Table 25 shows the proportion of total municipal expenditure devoted to school purposes in Cleveland and in 18 other cities of the same population class.

It appears from the table that in Cleveland 21.5 per cent of all governmental expenditures are for school purposes, as compared with an average of 20.4 per cent for the group of cities. Among the 19 cities Cleveland ranks sixth in the proportion of total expenditures applied to the public schools. It is evident, not only that when other expenditures are considered Cleveland is relatively liberal towards its schools, but that the community is aided in this liberality by the discretionary action of the Budget Commission. The friends of popular education have had no cause to complain concerning the activities of the Commission, which have tended to mitigate rather than to accentuate the restrictive effects of the state law.

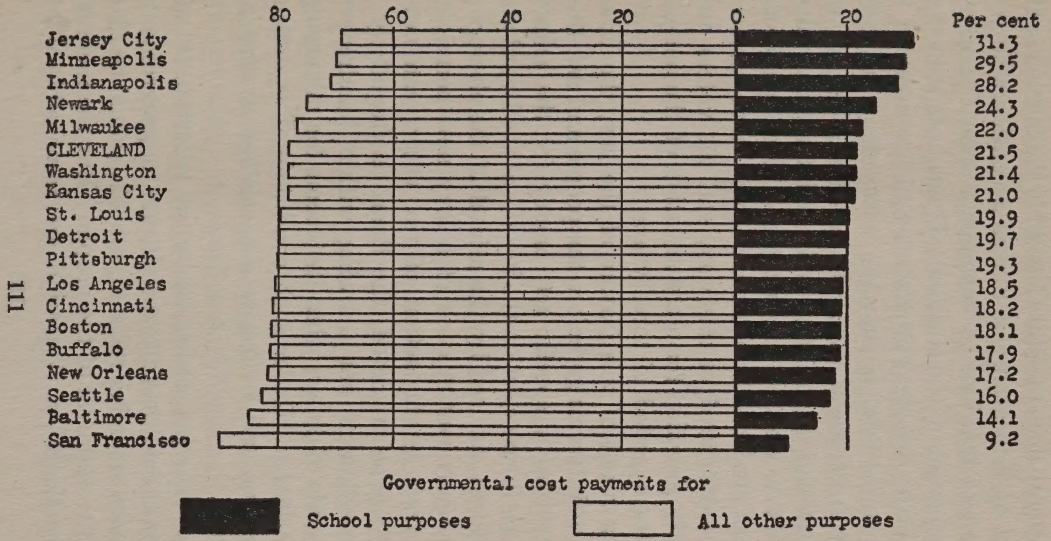


Diagram 9.—Proportion of total governmental cost payments devoted to school purposes in Cleveland and in 18 other cities

Not only does the state law limit the income of the Board of Education: it makes a considerable proportion of this income dependent upon the special authorization of the electors. It has been seen that, subject to the legal provisions limiting taxation by all governmental bodies, the voters may authorize levies in excess of five mills on the dollar for the expenses of operation and maintenance. Since 1913–14 a part of the income of the Board—the amount produced by a tax of one mill on the dollar—has been secured in this way, and the voters have recently provided for a continuation of the one-mill levy for a period of three years.

As a result of this feature of the law, the Board must at intervals go before the people and ask them to provide, by special act, money for the schools. At some future election the income of the Board may be actually reduced by the refusal of the electors to authorize a continuation of a levy now permitted. Moreover, as the action of the voters can never definitely be predicted, the Board is frequently in the position of not knowing within hundreds of thousands of dollars what its income for the ensuing year will be. Under such conditions it is difficult to lay out and to follow a consistent educational policy.

The situation seems to be an unfortunate one. It may be said that all expenditures for governmental purposes, including those for schools, should be made with the approval of the people. But the members of the Board of Education are responsible public

servants, and in Ohio their expenditure is sufficiently limited by the law restricting the outlay for all governmental purposes and by the authority of the Board of Budget Commissioners. If the members of the Board knew how much they would be at liberty to spend for school purposes they would be in a better position to meet their responsibility of distributing the money in such a way as to secure the best possible results.

Prospects for Increased Income

It has been seen that the present revenue of the Board of Education is inadequate, and that this inadequacy is due, primarily, to the provisions of a state law. What are the prospects for relief from existing restrictions, and in what direction is relief to be sought?

The most complete and simplest remedy for the shortage of funds of the Cleveland Board of Education would be to repeal the law limiting taxation. If the citizens of Cleveland, like the citizens of some American cities, were at liberty to determine what amounts they would spend upon their schools, it seems not improbable that they would authorize an expenditure sufficient to carry on the necessary educational work. A repeal or modification of the existing law is much to be desired, and action looking to that end is recommended. It is realized, however, that there are serious difficulties in the way of a change.

A state law can be changed only through the action

of a majority of the people of Ohio or of their representatives. A majority of the people of the state live, not in cities, but in towns and in country districts. It is stated that three-fifths of the total vote is a rural as distinguished from an urban vote. The inhabitants of the smaller towns and rural districts are not, apparently, inconvenienced by the state law limiting taxation. As the activities of the smaller communities are much less complex than those of cities, the cost of government is also less, and tax rates well within the limits fixed by the state law yield all the revenue required. It appears that the majority of the voters living outside the cities feel that the law limiting taxation serves as a desirable curb upon unwarranted extravagance on the part of city councils and boards of education.

If all the cities of the state were united in opposition to the existing law, the difficulty of securing its repeal would be appreciably lessened. But it seems that the unfortunate results of the law are much less noticeable in the smaller cities than in the larger cities. Moreover, sentiment against the restrictions appears to be less strong in Cincinnati, the second largest city of the state, than in Cleveland.

The repeal of the law limiting tax rates and the granting to local boards of education a larger measure of self-government are probably ends to be worked for. It seems doubtful, however, if these changes will be realized in the immediate future. And while the present laws remain in effect the Cleveland Board of Education must seek by all

means in its power to add to the revenues which are to be expended within the next year or two for urgently needed educational work.

A possible source of increase in revenues would consist in action by the Board of Budget Commissioners, allowing the Board of Education a larger proportion than heretofore of the total amounts which can be raised by taxation at a rate within the 15-mill limit. But it has been seen that the amounts asked for by the Board of Education have been reduced by the Budget Commissioners in less degree than have the amounts asked for by the other governmental bodies of the county, and that the proportion of total public revenue devoted to educational purposes is higher in Cleveland than in most cities of similar size. In view of these facts it does not seem probable that the Budget Commissioners will feel warranted in granting to the Board of Education an increased proportion of tax receipts.

While the law limiting taxation remains in force, and in the event that the Budget Commissioners fail to allow the Board of Education a larger share in the amounts raised through taxation, the revenue of the schools may still be augmented through a material increase in property valuations. It is obvious that, if the tax rate at which the Board of Education is allowed to levy remains constant, a 25 per cent increase in the assessed value of property will result in a 25 per cent increase in revenue. Is it probable that the tax duplicate will be increased in the near future?

Clearly an increase in the duplicate may be due to one or both of two causes: it may be due either to a rise in the actual market value of property, or to an increase in the ratio of assessed values to actual market values. In a city which is growing as rapidly as Cleveland it is evident that land values must be steadily advancing. Moreover, new buildings are constantly being erected. At the same time certain old buildings are being pulled down and existing buildings are suffering depreciation, but the decline in values due to these causes must be more than balanced by the advance. As a result of the increase in the market value of property a continuing growth in the tax duplicate is to be looked for, and there is no reason to suppose that this will not balance the growth in population and in needs of the public schools.

The Ohio law requires that all taxable property be assessed at its full value, and not, as in many states, at some fraction of this value. As to whether or not the law has been complied with in this respect there is some difference of opinion. It seems clear, however, that if property as a whole is under-assessed, the under-assessment is less serious than in many communities. The work of keeping assessed valuations at their proper level calls for the constant activity of public officers and for the co-operation of the public. Under the conditions prevailing, it is essential to the welfare of the public schools that this work be well done.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

1. In the past twelve years the expenditures of the Cleveland Board of Education have mounted rapidly. The Board spent $2,360,000 in 1902–03, while the figure for 1913–14 was $4,770,000. Of the total expenditure for 1913–14, $3,820,000 was for operation and maintenance and $950,000 for the permanent improvement of the school plant.

2. The revenues of the Board of Education have grown less rapidly than its expenditures. As a result, there are at present deficits in the tuition and contingent funds which together amount to over $700,000. In recent years the Board has been forced to borrow money on short term notes in order to meet its current obligations.

3. Cleveland's expenditures for school purposes, so far from being excessive, are in many important respects below the standard set by cities of similar size. The amounts spent for operation and maintenance of schools per inhabitant are about the same in Cleveland as in the average city, while the amounts spent per $1,000 of wealth are above the average. The most significant basis for comparing school

expenditures in the different cities is supplied by figures showing amounts spent per child in average daily attendance. Ratios of this sort indicate the relationship between expenditure and the work that is actually being done in the schools. For permanent improvements of the school plant Cleveland spends rather less per child in average daily attendance than the average city. Moreover, Cleveland spends less than the average city for the operation and maintenance of schools. In 1913–14 Cleveland's per capita expenditure for operation and maintenance was $46.38, as compared with an average for the group of cities of $49.04. This relatively low expenditure is partly due to the fact that free textbooks are not supplied.

4. Further analysis of figures for operation and maintenance per child in average daily attendance shows that Cleveland ranks relatively high among the cities in expenditure for certain purposes and relatively low in expenditure for other purposes. Cleveland spends more than the average city for:

Office of board and other business offices
Wages of janitors and other employees
Fuel
Maintenance—repairs, replacement of equipment, etc.

The items for which Cleveland spends less than the average city are:

Superintendent's office
Salaries and expenses of supervisors

Salaries and expenses of principals
Salaries of teachers
Stationery, supplies, and other instruction expenses

5. The statistics show that Cleveland ranks much higher in the group of cities with respect to expenditure for business purposes than with respect to expenditure for such educational purposes as salaries of teachers and salaries and expenses of principals. For every important business purpose Cleveland spends more than the average city; for every important educational purpose it spends less.

6. In Cleveland and elsewhere teachers' salaries constitute the largest single item of expenditure for operation and maintenance. In expenditure for this purpose per child in average daily attendance Cleveland ranks twelfth in a group of 17 cities.

7. An analysis of available data shows that Cleveland's low expenditure for teachers' salaries per child in average daily attendance is mainly due to over-large classes in elementary schools. In Cleveland the salaries of teachers in elementary schools, despite a recent increase, are somewhat lower per teacher employed than in the average city, while the average salary paid secondary school teachers is slightly above the prevailing standard.

8. The salaries of principals of elementary schools are distinctly lower in Cleveland than in the average city.

9. The employment of a director of schools, who has charge of all the business activities of the Board

of Education and of the construction and maintenance of the school plant, is a distinctive feature of Cleveland's plan of school administration. The question arises whether the employment of a business manager who is wholly independent of the Superintendent of Schools, through emphasizing business activities, may not have obscured the financial needs of distinctly educational work.

10. It should be possible to secure increased returns from expenditures made for school purposes by adopting what is known as the platoon system of school organization. This plan effects an economy in school accommodations through the increased utilization and continuous occupancy of special classrooms.

11. The Board of Education at present maintains two distinct systems of accounting, one in the office of the Clerk of the Board and the other in the office of the Director of Schools. The second of these systems shows, or can readily be made to show, all the items included in the first. Duplication of work can be eliminated, and more complete accounts maintained without increased expenditure, by combining the two systems.

12. A uniform system of accounts, designed to show the cost of the various activities of boards of education, is under consideration in the Department of the Auditor of State of the state of Ohio. In certain respects this system calls for improvements already introduced in the office of the Cleveland Director of Schools. The adoption of the entire system would represent an advance.

13. In recent years the Board of Education has been compelled to borrow on short term notes money to meet current demands upon the tuition and contingent funds. When these loans have been effected there have frequently been large cash balances in the building fund. Transfers of money from one fund to another are, under ordinary conditions, illegal. May it not be advisable to seek legislation authorizing the transfer to the tuition and contingent funds of some of the money in the building fund? Such a transfer would save to the Board the difference between the interest paid on short term notes and the interest received, at lower rates, from the banks in which cash balances are deposited.

14. The presence of large cash balances in the building fund is due, in part, to the fact that money is often secured through the sale of bonds some time before it is expended. May it not be possible, while observing the provisions of the law requiring that contracts be protected by appropriations made from money on hand or in process of collection, to dispose of bonds in such a way that the balance in the building fund shall not rise too much above the legal minimum? Such a procedure should result in appreciable savings in interest.

15. Cash balances in the various funds of the Board of Education are deposited in banks which, in bidding for the privilege of serving as depositaries, specify the interest rates which they will pay. While all the interest rates paid by the banks are relatively low, there is some variation. It is the practice of

the Clerk of the Board of Education to distribute money on hand among the banks in proportion to the amounts they are qualified to receive. The bank which pays the lowest rate of interest receives the same treatment as that which pays the highest. A small saving in interest could be effected by depositing in the banks paying the higher rates of interest as much money as they are qualified to receive, making deposits at lower rates only when the banks paying the higher rates have received all that they are qualified to hold.

16. The Board has recently been compelled to depart from its former practice of paying for permanent improvements in the school plant out of current revenues. The earlier procedure kept down the amounts of bond issues and is sound in principle, but the situation in Cleveland is an exceptional one. In view of the fact that the activities of the schools are being limited by lack of funds, it seems advisable, until increased revenues can be secured, to use all current income for operation and maintenance, issuing bonds in order to pay for necessary improvements. Such a policy should be regarded, however, as a temporary expedient, and followed only until an increased income is available.

17. Up to the present time the Board of Education has had no difficulty in borrowing money at current interest rates, either through sales of bonds or by issuing short term notes. As the short term notes are secured by taxes in process of collection, it should be possible to obtain money at prevailing

rates as long as the loans sought are smaller than the tax levy. With respect to bonds the situation is different. It seems not improbable that the legal restrictions on the power to tax which affect the Board's ability to pay interest and to maintain a sinking fund may sooner or later interfere with the marketing of bonds.

18. Most of the bonds issued by the Board of Education have been issued for uniform terms of 20 years, and the payment of principal and interest has been provided for by the creation of a sinking fund. It seems that the Board would do well further to consider the advisability of issuing serial bonds, thus doing away with the necessity of maintaining a sinking fund after the date of maturity of bonds already issued.

19. The finances of the Board of Education can be brought to a satisfactory condition either through reducing expenditures for school purposes, or through increasing the Board's revenues. Of these alternatives, the first is not seriously to be considered. The situation calls, then, for a substantial increase in revenue.

20. The income of the Board should be increased sufficiently to make it possible to spend adequate amounts for operation and maintenance and for permanent improvements, paying for most improvements not, as at present, with the proceeds of bond sales, but from revenue receipts.

21. The sources of the Board's revenue are: income from the Western Reserve Fund, income from

state taxation, income from local taxes, and earnings. Of these sources, the first and the last are of relatively small importance. Local taxes yield over 90 per cent of the Board's total income.

22. Funds raised by state taxation for school purposes are apportioned among the communities of the state on the basis of school census returns. Cleveland has not always received its maximum income from this source because of the incompleteness of the school censuses, but there has lately been a gain in accuracy. By taking further steps to obtain a complete enumeration of all children of school age within the school district, the Board will be able materially to increase its revenue.

23. The Board's income from local taxation is limited by provisions of the state law. The law provides that boards of education, except as authorized by vote of the people or to meet interest and sinking fund charges, shall not levy taxes at rates in excess of five mills on the dollar, and that the total tax for all ordinary expenses of government, including interest and sinking fund payments and expenditures specially authorized by the electors, imposed by all governmental bodies within each taxation district—the county, the municipality, and the board of education—shall not call for a rate in excess of 15 mills on the dollar. In practice it is the second of these legal limitations that has restricted the income of the Board of Education.

24. Boards of budget commissioners, consisting of county officers, have some discretionary authority

in adjusting the budgets of the several governmental bodies. The decisions of these boards affect, within definite limits and under certain circumstances, the incomes of boards of education. The rulings of the local Budget Commissioners have been, on the whole, distinctly more favorable to the Cleveland Board of Education than to the other governmental bodies within the taxation district.

25. The most recent assessment of Cleveland property was made in 1910. In the past few years, property has been assessed by deputies of the State Tax Commission; but a new law provides that the assessments are to be made in the future by locally elected officials, working under the direction of the county auditor.

26. For a considerable part of its income the Board of Education is dependent upon special taxes, which, under the law, must be authorized at intervals by the voters of the district. The revenue of the schools may be reduced as the result of some future election, and, as it is never certain that the authorization will be continued beyond the current term of years, the Board finds it difficult to formulate and to follow a far-sighted educational policy. It is believed that the situation would be improved by a modification of the state law, giving to boards of education wider powers and responsibilities in determining what taxation is needed for the support of the schools.

27. An increase in the revenues of the Board of Education may be brought about either through

the repeal of the law limiting tax rates or through an advance in the assessed value of property within the school district. The removal of restrictions on the tax rate is an end to be worked for, but it may be difficult to secure the repeal of the present law.

28. A change in valuations may occur either as the result of an advance in the actual market value of property in the district, or through a change in the ratio of assessed value to market value. The population of the city of Cleveland is increasing rapidly. It seems probable that taxable wealth must be increasing also, and at a rate not less rapid.

29. Ohio law provides that taxable property shall be assessed at its true market value rather than at some fractional part of this value. The enforcement of this provision of the law rests with public officers, and these officers may be aided in their duties by public co-operation. In order that the Board of Education may receive the maximum revenue permissible under the law, an effort must be made to keep the valuations as nearly as possible on a level with the actual market values.

APPENDIX

COMPARISONS OF EXPENDITURES FOR SCHOOL PURPOSES IN DIFFERENT CITIES

Data Available

In the reports of the U. S. Commissioner of Education for 1911 and 1912 complete and separate classifications of expenditures were given for elementary schools and for secondary schools, for evening schools and for day schools. The only complete classification appearing in the 1914 report relates to expenditures for all school purposes. There are tables dealing separately with expenditure for elementary schools and expenditure for secondary schools, but these do not include figures showing expenses of administration and supervision. Although the statistics of the most recent report are nominally less complete than the statistics for 1911 and for 1912, an examination of the earlier reports shows that complete information regarding all departments of school work was secured for but a relatively small number of cities; hence the reduction in the scope of the presentation is not as much of a loss as might be thought.

Bases of Computing Per Capitas

The bases used in computing per capitas are, from a theoretical standpoint, imperfect. Their imperfection arises, in part, from the omission of figures relative to attendance in evening and special schools, and in part from failure to take into account variations in the proportion of secondary school pupils in the different cities.

As the figures presented relative to expenditure include expenses for schools of all types, while the numbers representing pupils in average daily attendance, used as divisors in computing ratios, do not include pupils attending special schools or evening schools, it is clear that all the per capitas obtained will be somewhat larger than the per capitas that would have been obtained if all children had been considered, or if expenditure for pupils in special schools and evening schools had been excluded. What is more important, the relationship between the figures for the different cities is affected by variations in the proportion of special school and evening school pupils in these cities. But, as has been seen, separate data relative to expenditure for kindergartens, secondary schools, and elementary schools, and data relative to attendance in special schools are not available. Moreover, per capitas obtained by dividing expenditure for all schools by the total number of children, including those in special and evening schools, might be less significant than the per capitas that have been used.

The results of including special and evening school

pupils in the divisors used in computing per capitas may be illustrated by computations based on the hypothetical figures of the following table:

City	Pupils in average daily attendance in			Expenditure		
	Kindergartens, elementary schools, and high schools	Evening and special schools	All schools	For all schools	Per capita based on pupils in average daily attendance in	
					Kindergartens, elementary, and high schools	All schools
A	1,700	300	2,000	$50,000	$29.41	$25.00
B	1,900	100	2,000	50,000	26.32	25.00

Cities A and B spend $50,000 each for all schools and the total number of children in average daily attendance in each city is 2,000; hence the per capita expenditure, based on the total number of children, is $25.00 for each city. But in City A only 1,700 of the 2,000 children are in kindergartens, elementary and high schools, as compared with 1,900 in City B. If, employing the method which has been followed in computing the ratios used in the present study, the total expenditure of each city is divided by the number of pupils in regular schools, the resulting per capitas are $29.41 for City A and $26.32 for City B. Both of these per capitas are higher than the other per capitas mentioned. Moreover, the figures for A and for B differ rather widely, and as the total expenditure and the total number of children are the

same for both cities, it might seem that the ratios were less valid than those derived from expenditure for all schools and total attendance.

It is a mistake, however, to assume that ratios based on total expense and all children in attendance are valid and comparable figures. The point can not be too strongly emphasized that if the per capita expenditure for regular schools had been identical in Cities A and B, and if the per capita expenditure for evening and special schools had likewise been identical, the aggregate expenditure for all schools would not have been the same for the two cities. A day's attendance in evening school is not by any means equivalent to a day's attendance in elementary school—the session is shorter and the necessary outlay is, therefore, less. While data relative to the work of special schools are not available, it is probable that per capita expenditures exceed those for elementary schools, but the number of pupils in special schools is, in general, only a small fraction of the number in evening schools. Hence it is probable that the per capitas for evening and special schools combined are much lower than those for regular schools.

Returning to the illustration: if in both cities the per capita expenditure for regular day schools was $25.50 and the per capita for special and evening schools $15.50, the aggregate expenditure of City B would be $50,000, the figure appearing in the table, but the aggregate expenditure of City A would be $48,000. The per capitas based on all

children and expenditure for all schools would be $25.00 for City B and $24.00 for City A. It is clear that, even with the number of pupils in special and evening schools included in the divisors, the ratios presented in the right-hand column of the table are not strictly comparable.

The foregoing figures are presented, not to prove the perfection of the methods of computing ratios employed in the present study, for this they do not do, but as an illustration of the difficulties encountered in seeking to compare the expense statistics of different cities. The factors that have been mentioned are not of a sort seriously to affect the results of the comparisons made in the text. It is to be noted that failure to take into account, in computing ratios, pupils attending special and evening schools tends to raise the per capitas for all cities—it does not raise the per capita for one city and lower that for another. For this reason, and as the proportion of special and evening school pupils and the proportion of the total expense devoted to their instruction is, in all cities, relatively small, it seems probable that the position of Cleveland in the group of cities is not greatly influenced by the limitations of the statistical classification.

Another factor which affects the comparability of the ratios is the variation in the proportion of pupils in secondary schools in the different cities. In all cities the per capita expenditure is higher for secondary school education than for elementary school education. Hence the fact that a given

city has a relatively high per capita expenditure for all school purposes may mean merely that the proportion of secondary school pupils in that city is exceptionally large. As has been stated, separate data as to the expenditure of elementary schools and of secondary schools for all school purposes, including general control, are not available.

It would, however, be easy to magnify the importance of the factor just mentioned, for the effect of the varying proportion of secondary school pupils is modified by considerations similar to those which modify the effects of the limitations of classification considered above. All the cities compared have at least some secondary school pupils; hence the presence of these pupils affects all ratios in the same direction—all the per capitas are raised by the presence of secondary schools and none is lowered. Moreover, the proportion of secondary school pupils is, in most cities, relatively small, and this limits the possible effect of variations. It should be noted further that, as Cleveland's proportion of pupils in secondary schools, 10.0 per cent, differs but slightly from the proportion computed for all the cities considered together, 10.3 per cent, the per capitas for Cleveland may be regarded as fairly comparable with those for the group.

Compensating Errors

Reference has been made in the text to differences in the methods of accounting employed in different cities and the probable influence of these differences

on the comparability of data. It may be well at this point to direct attention to a statistical principle the operation of which has the effect of improving the bases of comparison. It is very probable that, where a group of 18 cities is dealt with, differences in classification tend to offset, to correct, one another. The Cleveland figures, as corrected in the office of the Clerk of the Board, are known to meet the requirements of the schedule sent out by the Commissioner of Education. It is probable that the figures reported for certain other cities, which could not be reviewed or verified in the course of the present inquiry, do not meet these requirements. But if one city has included under expense for teachers' salaries items which should not have been included, it is quite probable that other cities have omitted from this same category items which should have been included. It follows that, while Cleveland's per capita expenditure for teachers' salaries may mean something different from the per capita expenditure computed for any other one city, it probably means approximately the same thing as the per capita for teachers' salaries reported for the group of cities. In other words, the Cleveland figures are more properly comparable with the group figures than with the figures for any one city.

CLEVELAND EDUCATION SURVEY REPORTS

These reports can be secured from the Survey Committee of the Cleveland Foundation, Cleveland, Ohio. They will be sent postpaid for 25 cents per volume with the exception of "Measuring the Work of the Public Schools" by Judd, "The Cleveland School Survey" by Ayres, and "Wage Earning and Education" by Lutz. These three volumes will be sent for 50 cents each. All of these reports may be secured at the same rates from the Division of Education of the Russell Sage Foundation, New York City.

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